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ABSTRACT

The document presents a discussion and evaluation of the training workshop program developed by the Iowa Educational Broadcasting Network and the Iowa State Department of Public Instruction to help teachers incorporate the Bread and Butterflies television series on career development into fourth, fifth, and sixth grade curricula. The Bread and Butterflies series is described as a quality product with extensive training aids, including a comprehensive curriculum guide, individual program analysis, before-viewing readiness plan, program summaries, and suggestions for classroom discussion and activities. Workshop goals included informing teachers of the program and its content, incorporating it into existing curricula throughout Iowa, and fostering a positive teacher attitude. A one-day, inservice, training workshop was developed for 14 regions of Iowa. A group of teacher trainers selected by region from school systems throughout the State received the training and, in turn, provided inservice training to faculties in their respective school systems. Evaluation was made of the teacher training workshops, career development attitude of upper elementary teachers, and cost effectiveness. A detailed discussion of evaluation findings is presented, and tables and figures supplement the material. (LH)

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Finally, acknowledgment must be made of the exceptionally fine cooperation and mutual support between Department of Public Instruction and Iowa Educational Broadcasting Network task force members who without exception gave unstintingly of their time and talents to help assure successful mission attainment.

At the start of the 1974-75 school year, the Iowa Educational Broadcasting Network (IEBN) and the Iowa State Department of Public Instruction (DPI) combined resources to form a task force* whose mission was to install the Bread and Butterflies series into the curriculum of the fourth, fifth, and sixth grades in all schools within the state.

Bread and Butterflies is the title of a major classroom television series consisting of 15, 15-minute programs in color for 9- to 12-year-olds featuring an innovative approach to career development. Both down-to-earth and suspenseful, the series challenges boys and girls in grades four to six to ask themselves who they are and what they will become. Not only does the series facilitate student career development, but it addresses itself to personal decision making, values and standards of conduct. Youngsters of varied backgrounds, personalities, and abilities are depicted in situations in which one or more of them must tackle a problem or assume responsibility for a judgment or an action;

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* Members of the Task Force:

Iowa Educational Broadcasting Network

1. Jon Cecil, Manager, Instructional Television
2. Sharon Dowd, Utilization Specialist, Instructional Television
3. Dan Summy, Utilization Specialist, Instructional Television

Iowa State Department of Public Instruction

1. Emeron P. Dettmann, Consultant, Career Education Division
2. Dr. Howard R. Hammond, Consultant, Career Teacher Education (Chairman)
3. Edward L. Ranney, Consultant, Guidance Services Section
4. Sharon L. Slezak, Consultant, Curriculum Division
5. Dr. Leland R. Wolf, Consultant, Individualized Instruction
6. James E. Wolter, Consultant, Career Education Division
7. Dr. Joseph Wolvek, Consultant, Planning, Research, and Evaluation Division

but the dramatizations are left open-ended so that the viewer participates in the problem-solving process. By providing the context in which understanding others and the work they do in our complex society, the series provides the student with a means of understanding himself. Made available on a nation-wide basis by the Agency for Instructional Television, the series took two years to plan and produce and was accomplished through a national consortium of 34 agencies in the United States and Canada, including a grant from the Exxon Corporation. Extensive training aids to accompany the series were also developed and included a comprehensive curriculum guide designed to make the task of integrating the series into the regular daily classwork easy and interesting for teachers. Each of the 15 programs is analyzed in the guide, including the major theme and teaching goal, a before-viewing readiness plan with suggested motivational questions and activities, a summary of the program itself for use by teachers who have not had an opportunity to preview the program, and concluding sections on two levels of difficulty with questions that serve as springboards for class discussion, as well as short- and long-term activities emphasizing the key concepts of the program.

Included in the production of the series and materials was an evaluation by the Educational Testing Service of its effectiveness. Flaugher and Knapp (1), staff evaluators of the Educational Testing Service, conclude "...producers' efforts were directed toward creating stimulating experiences, such that viewers would find the particular topic interesting, be willing or even anxious to talk about it afterwards, remember it for some time, and in general probably undergo certain affective changes...." The evaluators in concluding their study agreed that overall impact of the series is quite positive as an affective

stimulus for fourth, fifth, and sixth grade children, succeeding in involving children, exciting them, and stimulating their discussion both in and out of class.

The Bread and Butterflies series provided the task force with a quality product, one of the two basic ingredients of a successful in-service effort. What remained was to find a way to inservice teachers in the effective use of the product.

Of prime importance in the planning considerations of the task force was the need to foster a positive teacher attitude toward career development as a result of the inservice experience. The recognition of teacher attitude as a key element in the successful installation of the Bread and Butterflies series was suggested and reinforced by findings reported in the literature. Adams (2), in discussing how to help teachers cope with change, reaches the conclusion that new methods and innovations are bound to fail if the teachers' attitudes are not taken into account. Howell (3), in reporting on a two-part study to determine if an inservice education program conducted for language teachers in Pinellas County, Florida, could change attitudes toward language and behavior in teaching language, found that the inservice program conducted had effected significant change in teachers' attitudes toward language with concomitant change also effected in teacher behavior. Devore (4), in studying variables necessary to promote change in the curriculum, under a contract from the U. S. Office of Education, in a review of related literature identified teacher attitudes as a key variable to be taken into consideration when planning inservice education programs directed to initiating new, or altering existing, practices. The Ball State University (5) study of the Indianapolis Individualized Inservice Project reported one of the most significant findings was

that teacher attitude appeared to be the greatest determinant of the success or failure of the individualized inservice approach offered to elementary teachers in inner city schools. Stone and Schwarz (6), in reporting the outcome of a project dealing with sex education instruction, indicated experimental group teachers who received inservice training, as opposed to control group teachers who did not receive inservice training, demonstrated significantly increased levels of knowledge of and attitudes toward teaching sex education, with attendant increases found in the knowledge of healthy sexuality gained by the pupils of the experimental group of teachers. Butts and Ruan (7), in studying the implementation of curriculum change in the process of science, report that the negative attitude of teachers and their relationship to other teachers and principals could be the most important block to curriculum change, while also noting that attitudes reflect teachers' perceptions which structure behavior and thus represent a key criterion to be considered when contemplating change or improvement.

It was evident to the task force that in addition to making teachers aware of the series and its intent, and providing them with the means to incorporate it into the upper elementary curriculum, that the inservice training experiences be designed with the fostering, development, and maintenance of a positive teacher attitude as an outcome of major importance.

The strategy adopted by the task force within its given limits of time and resources utilized a diffusion approach whereby the task force would provide a one-day inservice training workshop in each of 14 regions of the state for a cadre of teacher trainers selected by region from school systems throughout the state. Following the training provided by the task force, each teacher trainer would be expected to

provide inservice training to the fourth, fifth, and sixth grade faculties in his respective school system in conjunction with inservice and preview telecasts scheduled by IEBN to be shown from October 1974 through January 1975. The series telecast for student use was scheduled to start in February 1975.

The one-day inservice training experience which the task force designed for the teacher trainers focused upon three desired outcomes: 1) making teacher trainers aware of how the Bread and Butterflies series could incorporate career development as an integral part of the curriculum for 9- to 12-year olds; 2) skills, techniques, materials, and guides by which teacher trainers could demonstrate the effective use of the Bread and Butterflies series for their respective faculties; and 3) creating a positive attitude toward career development for both teacher trainers and the faculty they were to inservice through the use of the Bread and Butterflies inservice training experiences offered by the task force in the first instance and by the teacher trainers in the second instance, respectively. Each of the three desired outcomes has been evaluated and the findings are the subject of this report.

Formative Evaluation: Task Force Workshops for Teacher Trainers

The IEBN-DPI task force carefully designed the one-day workshop for teacher trainers focusing on what it considered would be a balanced mix of presentations concerning making the teacher trainers aware of the purpose of the Bread and Butterflies series and the means by which the teacher trainers could inservice their faculties in the effective use of the telecast series with pupils.

If the task force was to successfully accomplish its mission, it thought it advisable to devise a means by which it could monitor its workshop activities and thus be kept apprised of whether 1) the workshops

for teacher trainers were in fact accomplishing the purposes for which they were designed, 2) the workshops were consistently presented at a high level of effectiveness in all 14 regional areas, and 3) the workshops as presented were having no adverse effect upon the attitude of the teacher trainers.

Formative Evaluation Form

An 11-item formative evaluation form was designed to elicit feedback in the hereinabove noted areas. The evaluation form was distributed to the teacher trainers at the close of each workshop and 10 minutes of workshop time was provided for completion prior to dismissal.

Ten of the items solicited 5-foil multiple choice responses, while the eleventh item asked for value judgments concerning each segment of the workshop program, with one exception. Following the printing of the form, the task force decided to expand the time for some of the program areas and deleted coverage of the demonstration and explanation of program themes which it thought was adequately covered in the teacher's guide that was distributed. However, no announcement was made at any of the workshops concerning the program deletion. The response teacher trainers made to that program segment item served as a benchmark from which the task force could make some assumptions concerning the general attitude halo effect — or as referred to in the debriefing sessions, the teacher trainers' "yummy in the tummy" level.

Sampling and Return Rate

All teacher trainers attending the workshop were included as evaluation respondents.

The return rate for each workshop was descriptive in that, with only rare exception, all teacher trainers returned completed evaluations.

Procedure

Following the close of each workshop, the writer tallied the evaluation returns and debriefed the task force workshop presenters with the information provided by the teacher trainers. Adjustments aimed at improving outcomes were made by the task force in the presentation of the next workshop accordingly.

Findings

Figures 1 and 2 display the responses to multiple choice items 3 and 5, respectively. These two items primarily served to keep the task force informed of teacher trainer awareness levels of the Bread and Butterflies series purposes being attained at each workshop.

Figures 3, 4, 5, 6, and 7 display the responses to multiple choice items 2, 6, 7, 9, and 10, respectively. These items primarily served to keep the task force informed of the teacher trainers' perception of skill levels in the use of series-related materials and training methods attained as a result of the workshop provided.

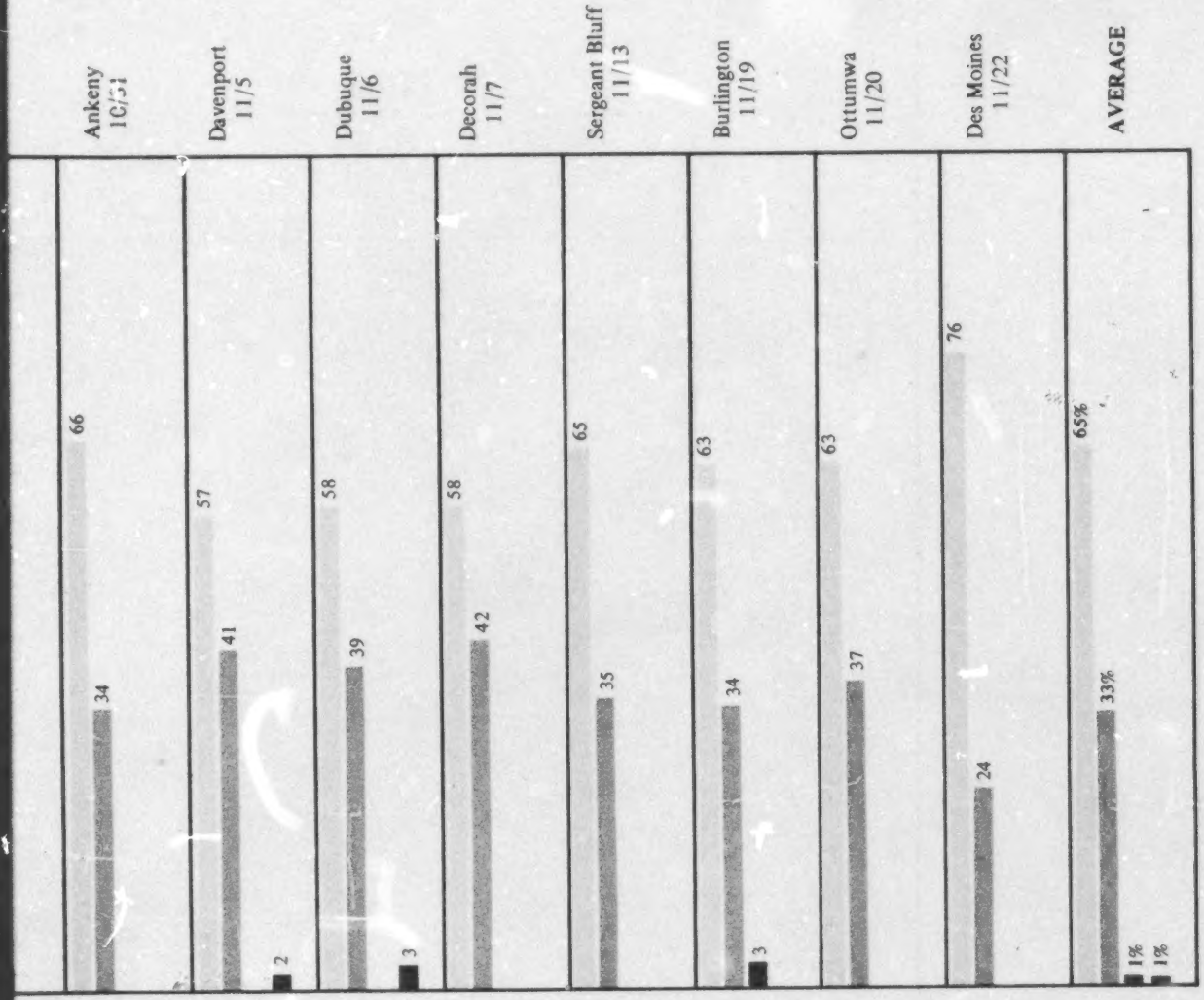
Figures 8, 9, and 10 display the responses to multiple choice items 1, 4, and 8, respectively. These items primarily served to keep the task force informed of teacher trainer attitude toward the workshop experience provided.

Table 1 presents the value judgments made by the teacher trainers to each segment of the workshop program. Of interest in Table 1 is the high level of positive halo effect noted in the responses teacher trainers made to the nonexistent segment of the program dealing with demonstration and explanation of program themes. Using this level as a benchmark, those segments which evidenced appreciably higher acceptance levels were noted by the task force as probably not in need of modification, while an area indicating an equal or lower response level was given

Figure 1. BREAD AND BUTTERFLIES WORKSHOP PARTICIP*NTS

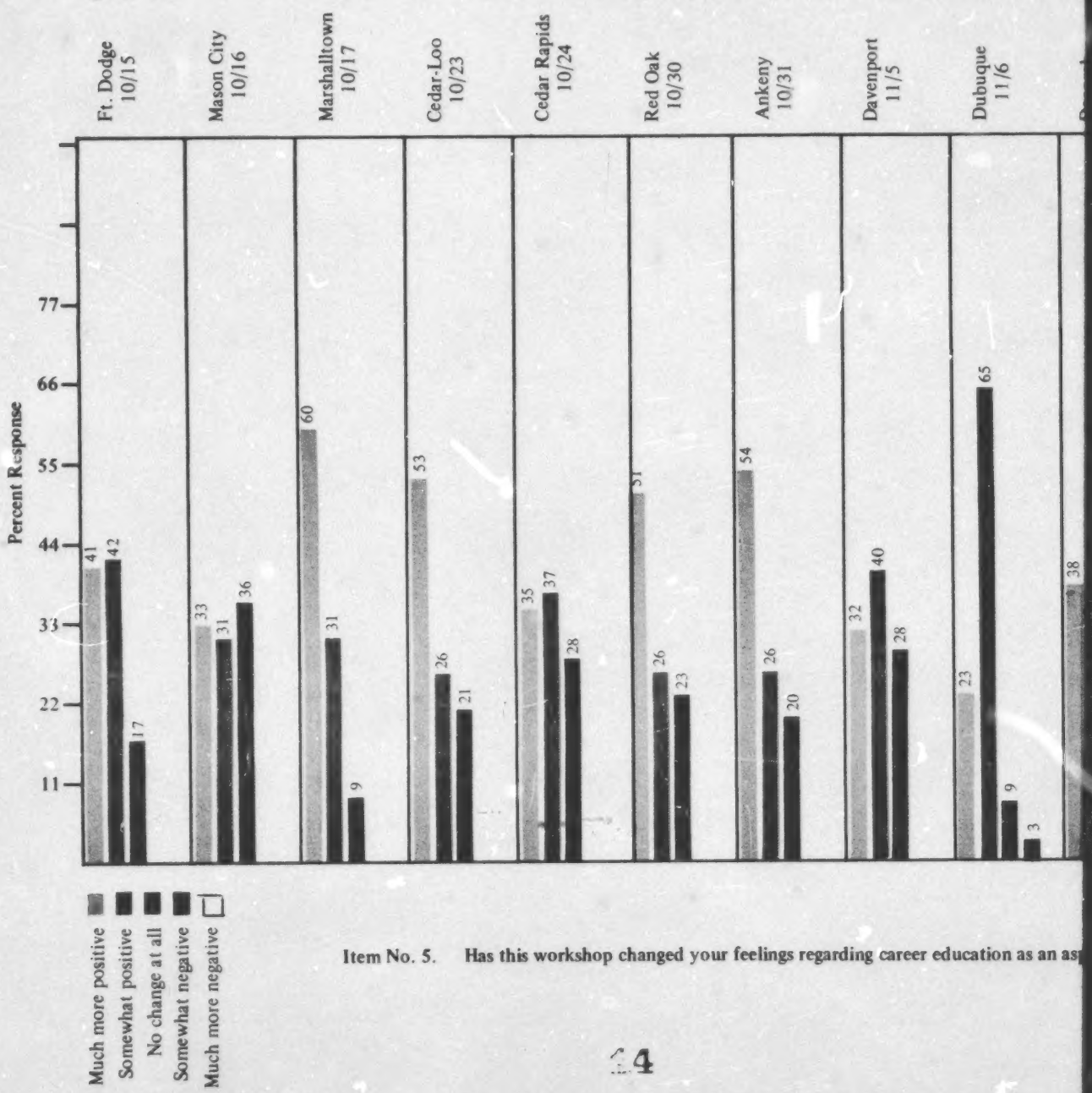
Item No. 3. Did this workshop help you understand the underlying purpose of the Bread

ERFLIES WORKSHOP PARTICIPANTS QUESTIONNAIRES



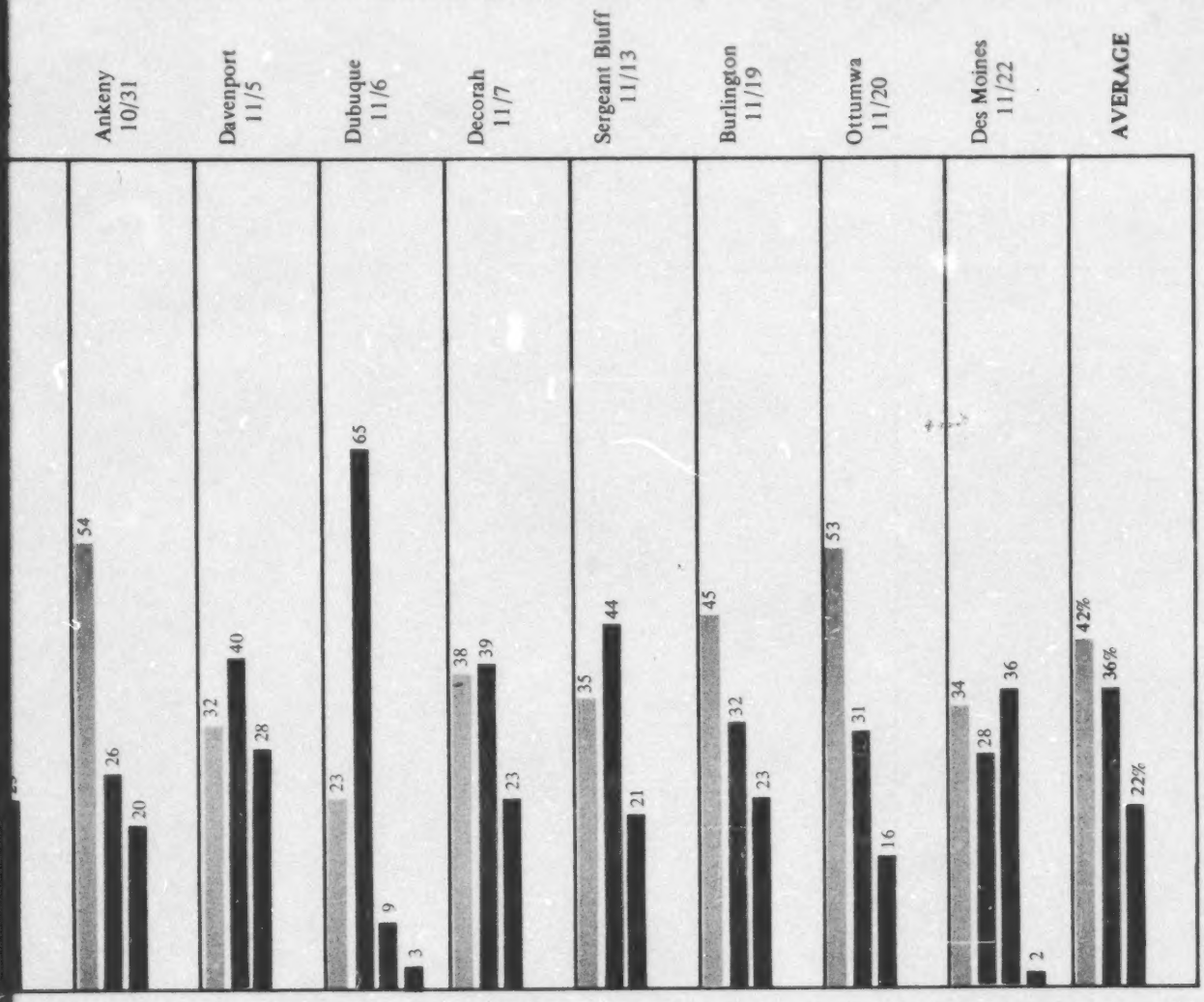
understand the underlying purpose of the Bread and Butterflies series?

Figure 2.



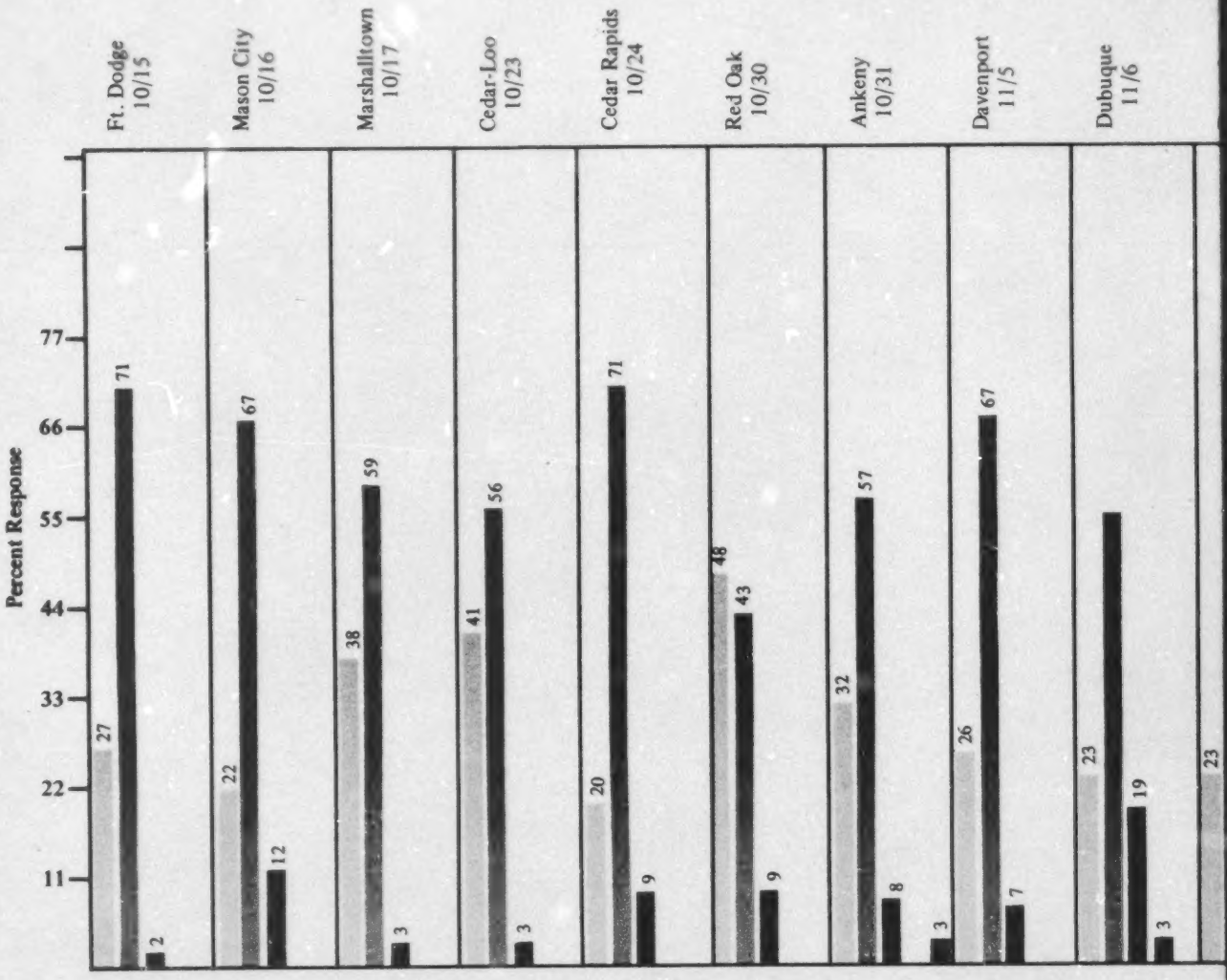
Item No. 5. Has this workshop changed your feelings regarding career education as an as

TERFLIES WORKSHOP PARTICIPANTS QUESTIONNAIRES



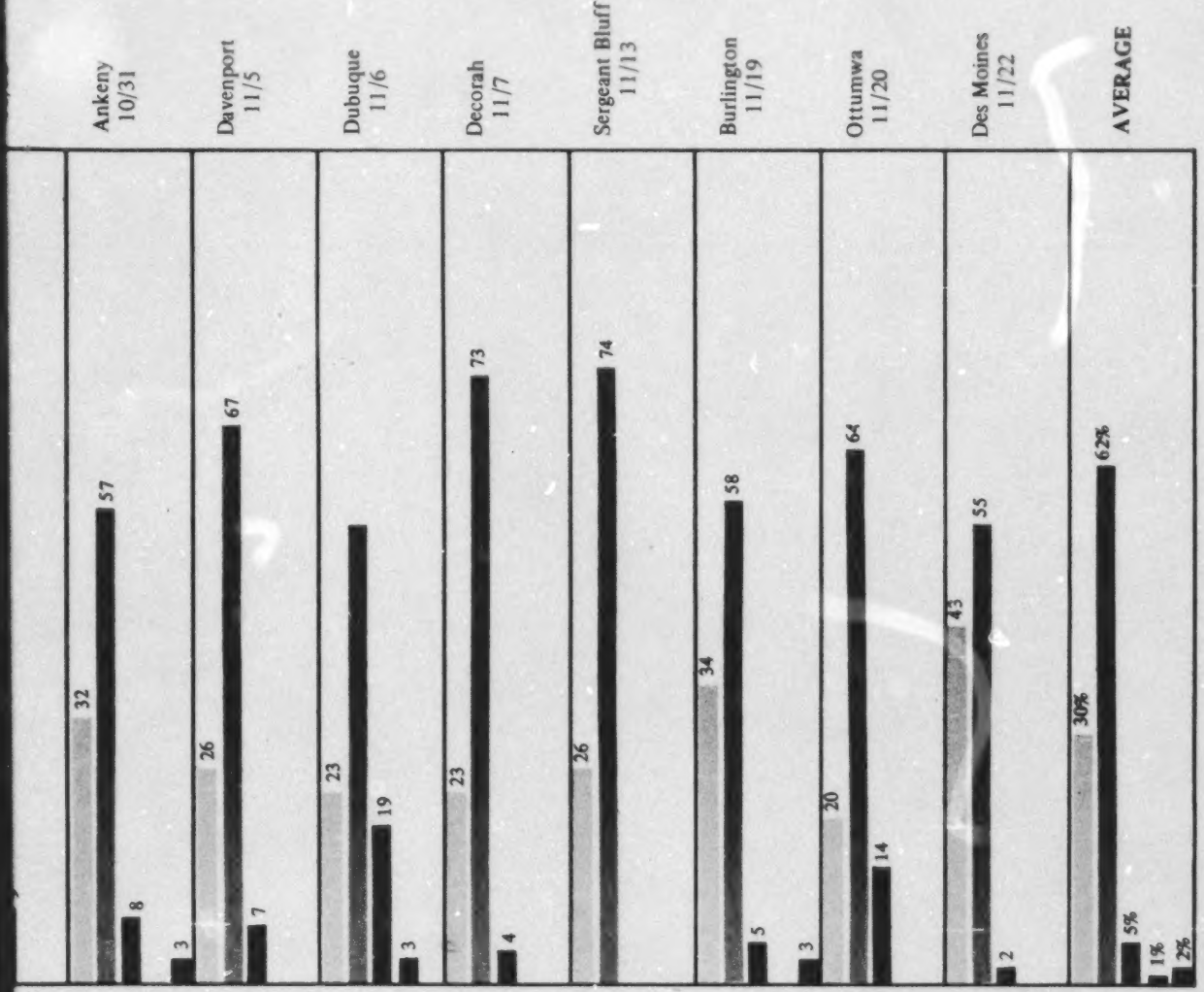
your feelings regarding career education as an aspect of education?

Figure 3. BREAD AND BUTTERFLIES WORKSHOP PARTICIPANTS



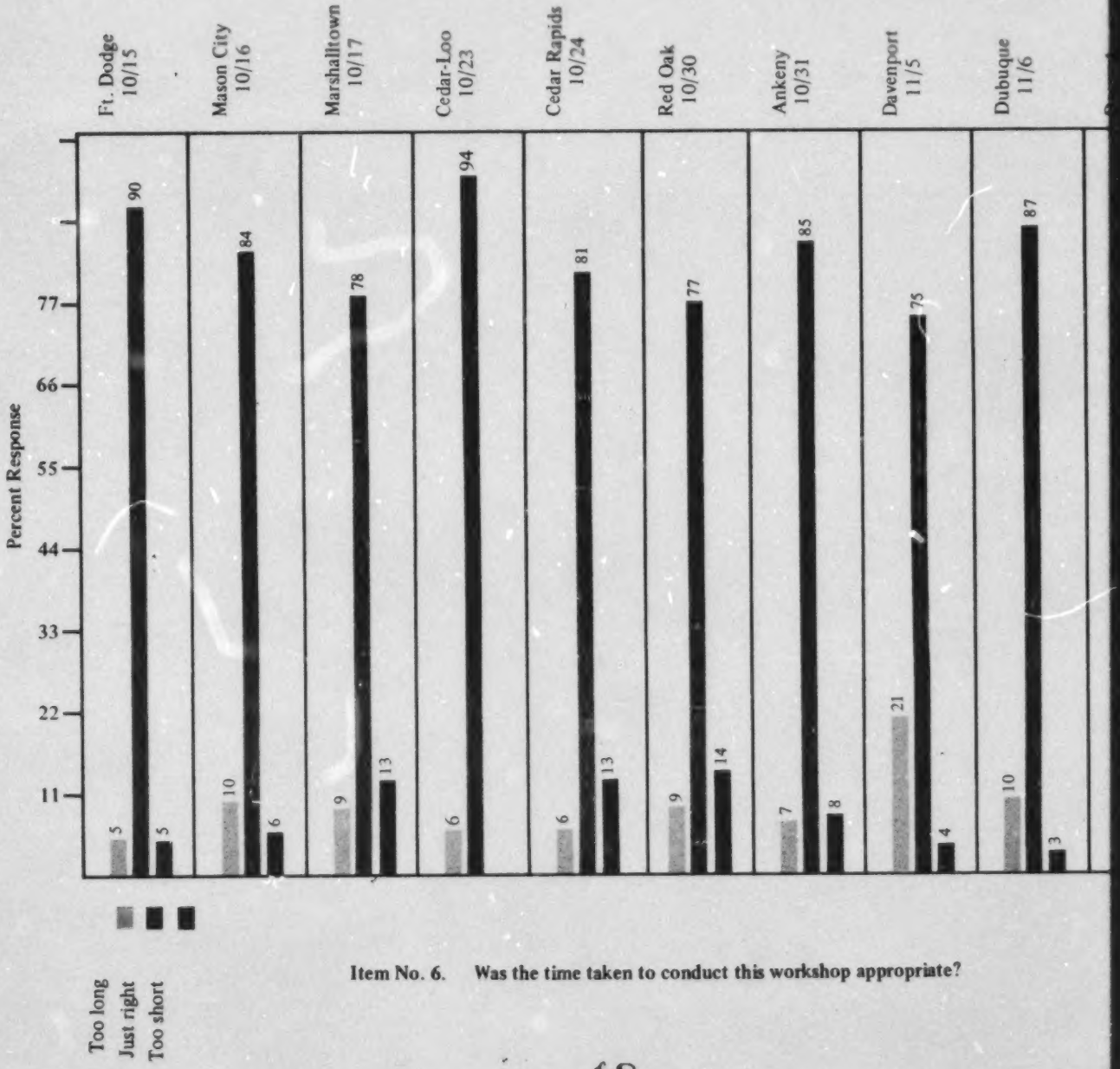
Item No. 2. Did this workshop affect your confidence to provide inservice training to teac
this series with their classes?

TERFLIES WORKSHOP PARTICIPANTS QUESTIONNAIRES



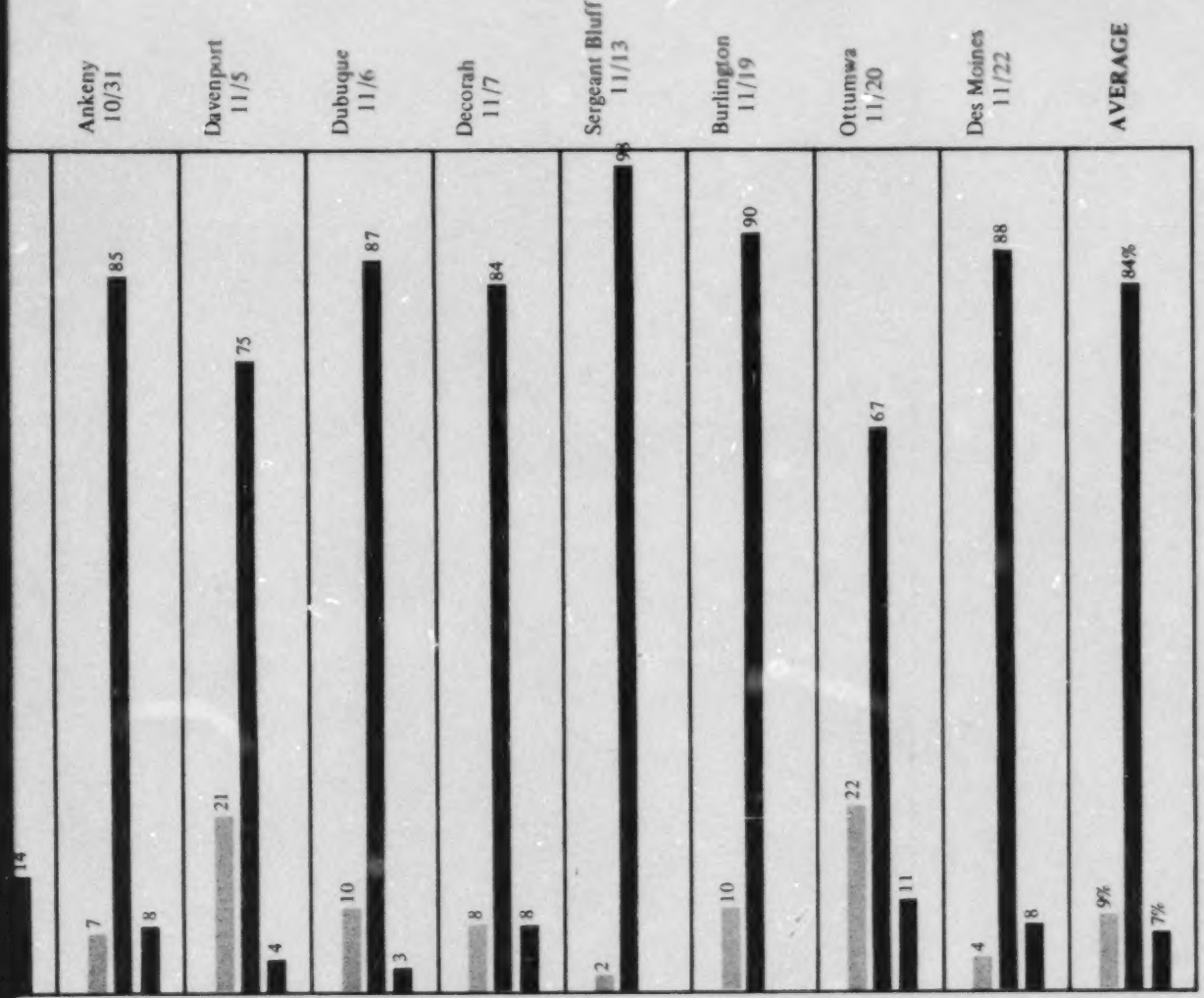
ur confidence to provide inservice training to teachers in your school district for their use of

Figure 4. BREAD AND BUTTERFLIES WORKSHOP PARTICIPANTS



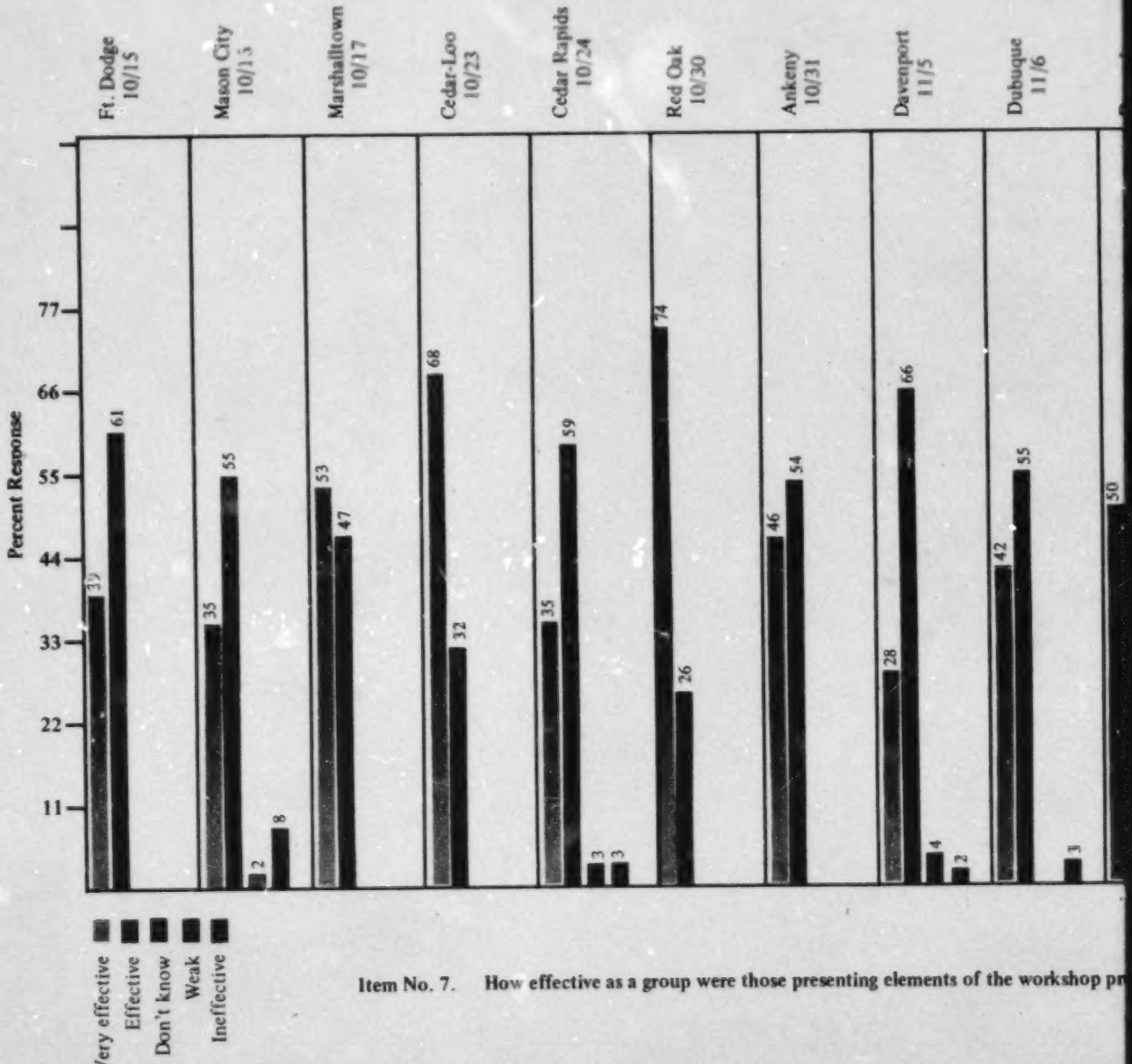
Item No. 6. Was the time taken to conduct this workshop appropriate?

ERFLIES WORKSHOP PARTICIPANTS QUESTIONNAIRES



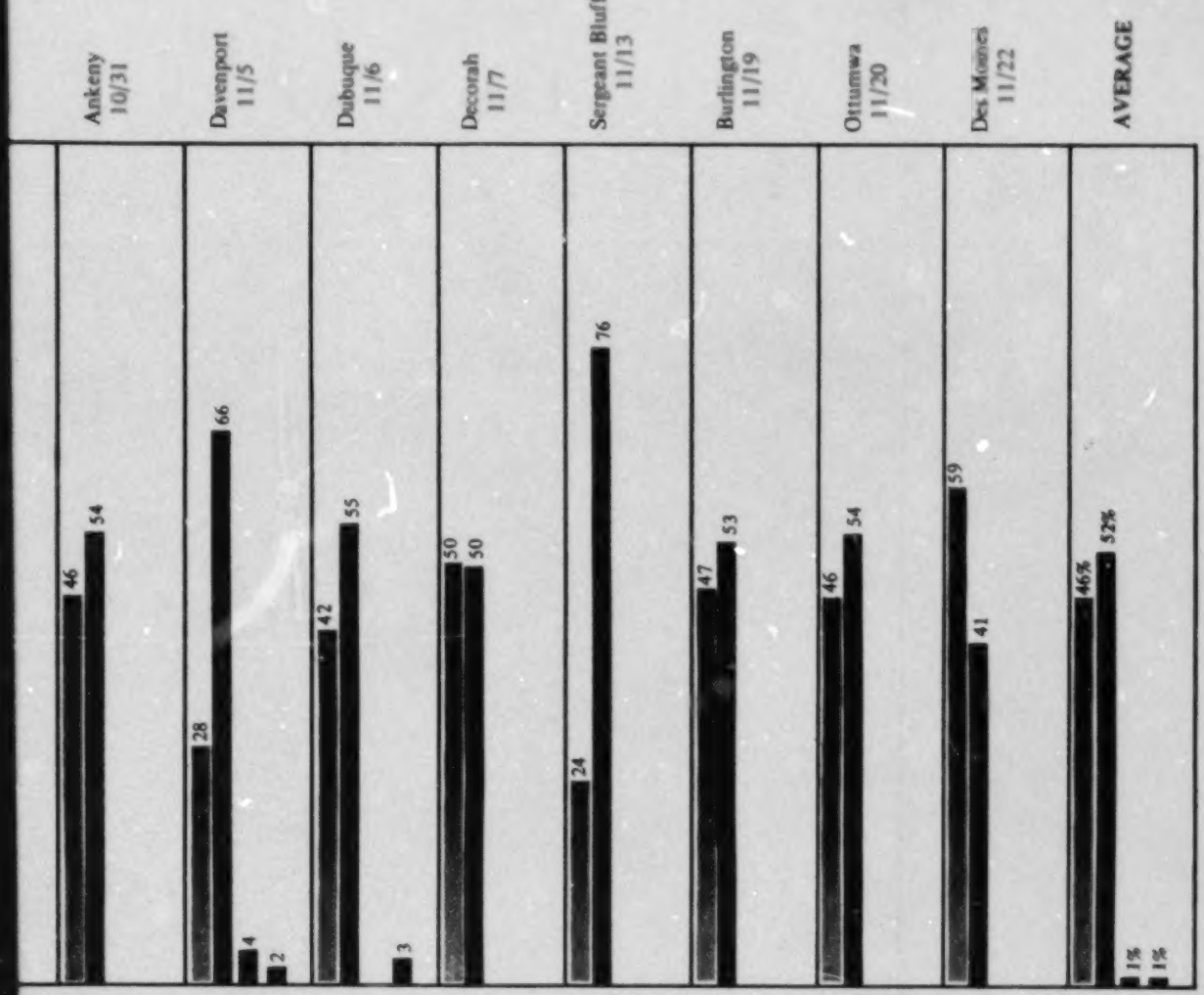
t this workshop appropriate?

Figure 5. BREAD AND BUTTERFLIES WORKSHOP PARTICIPANTS



Item No. 7. How effective as a group were those presenting elements of the workshop pr

ERFLIES WORKSHOP PARTICIPANTS QUESTIONNAIRES

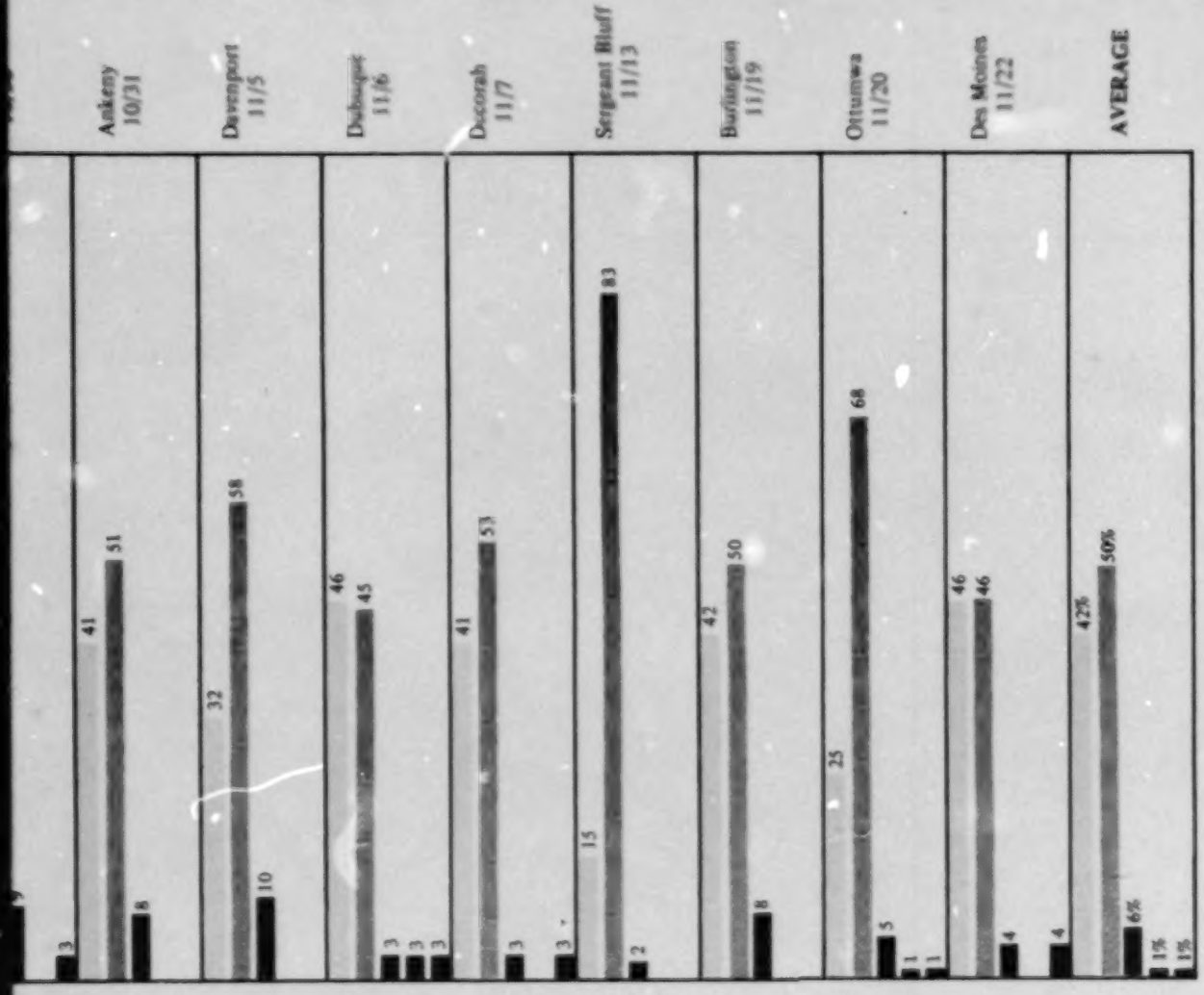


those presenting elements of the workshop program?

Figure 6. BREAD AND BUTTERFLIES WORKSHOP PARTICIPANTS

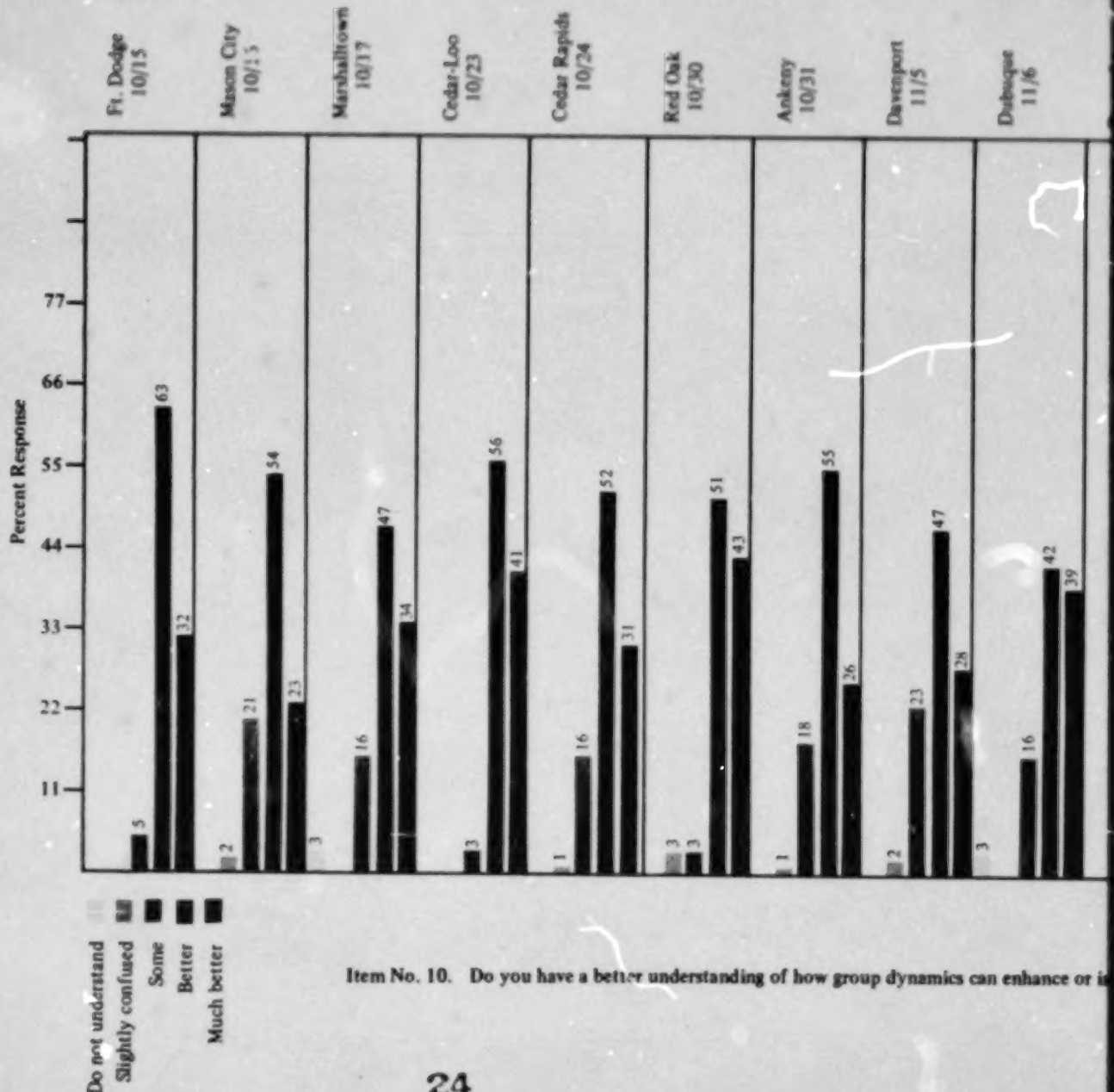
Item No. 9. How motivated are you toward providing inservice training to the fourth, this series?

TERFLIES WORKSHOP PARTICIPANTS QUESTIONNAIRES



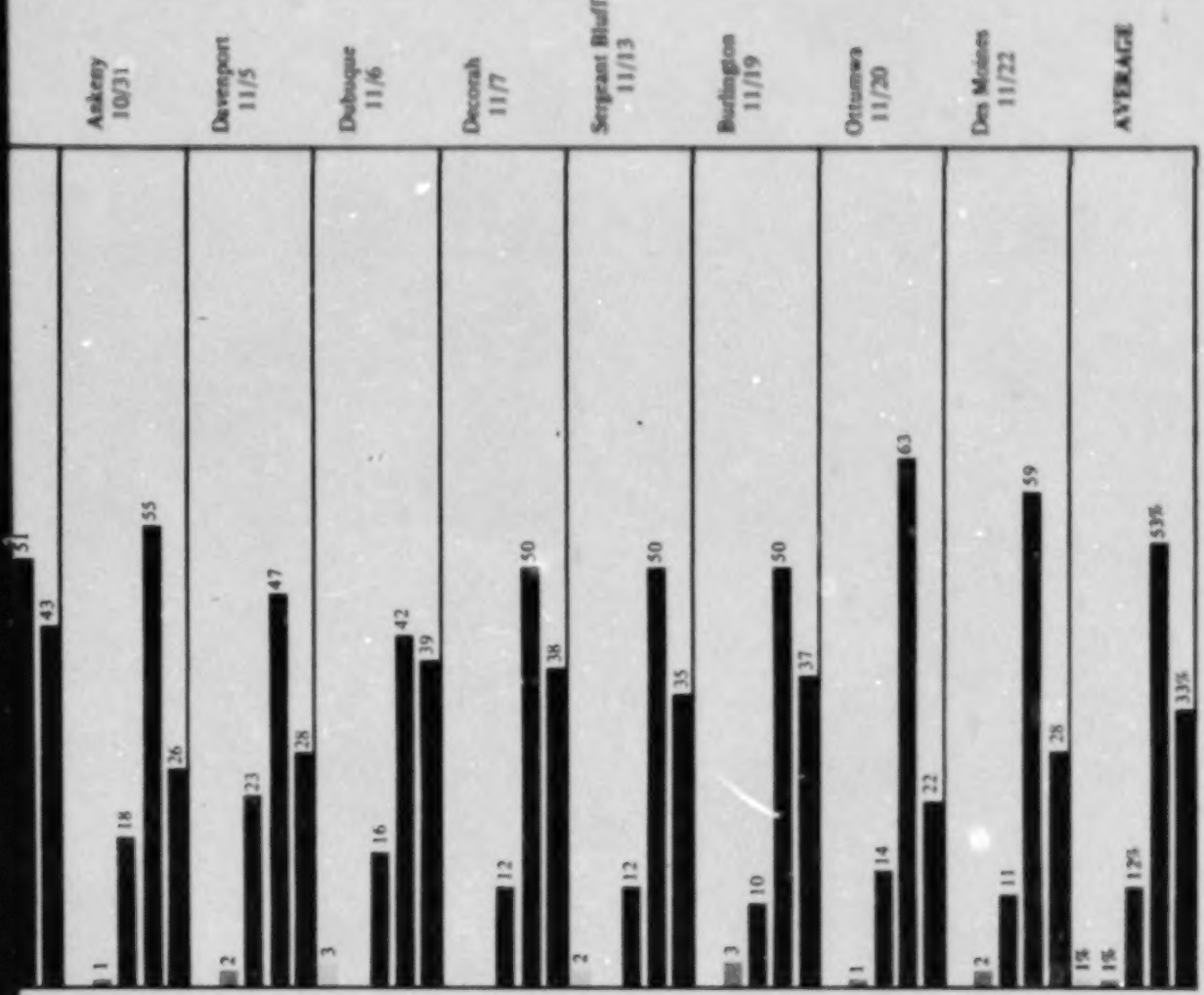
ward providing inservice training to the fourth, fifth, and sixth grade teachers in the use of

Figure 7.



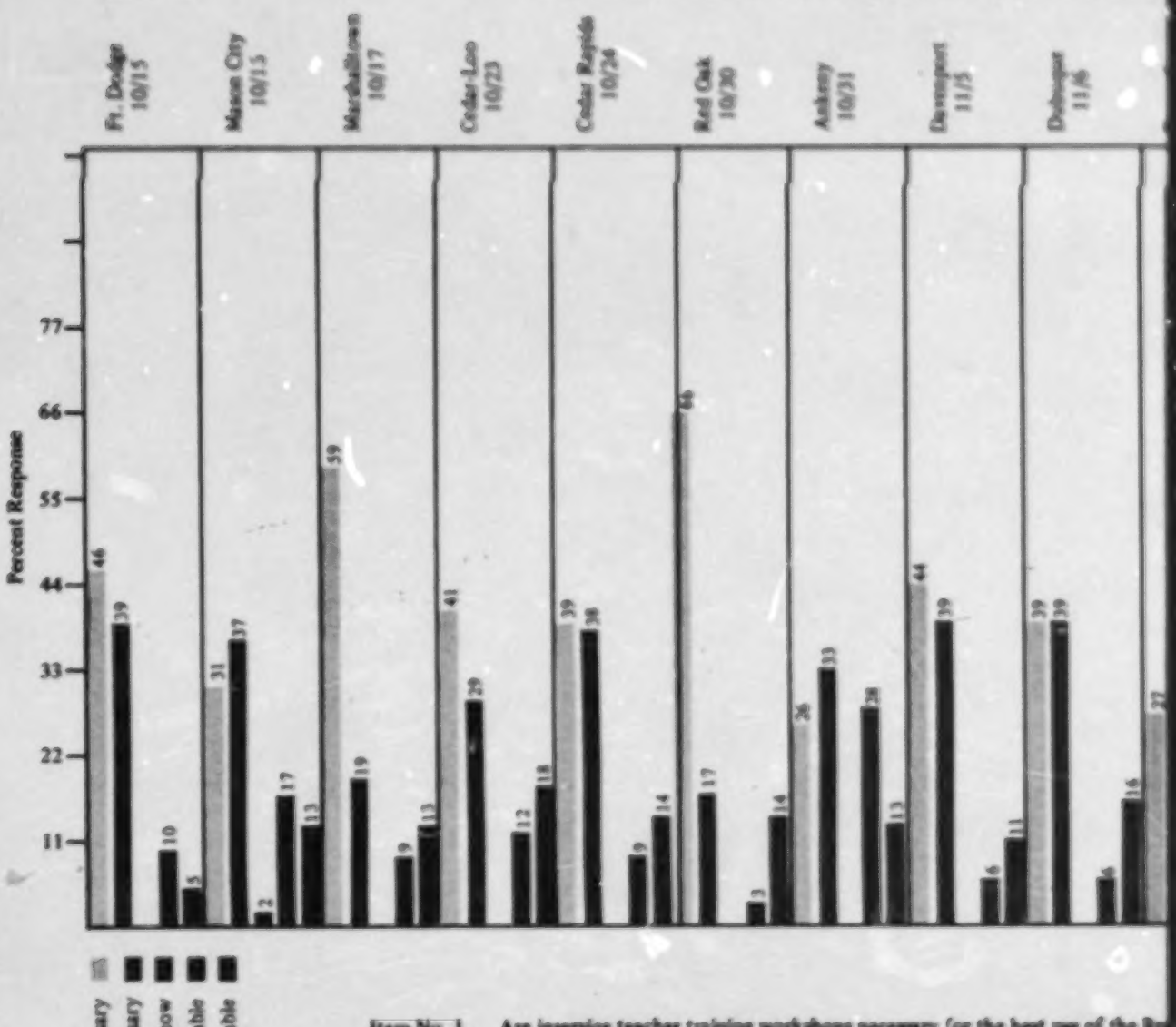
Item No. 10. Do you have a better understanding of how group dynamics can enhance or i

TERFLIES WORKSHOP PARTICIPANTS QUESTIONNAIRES



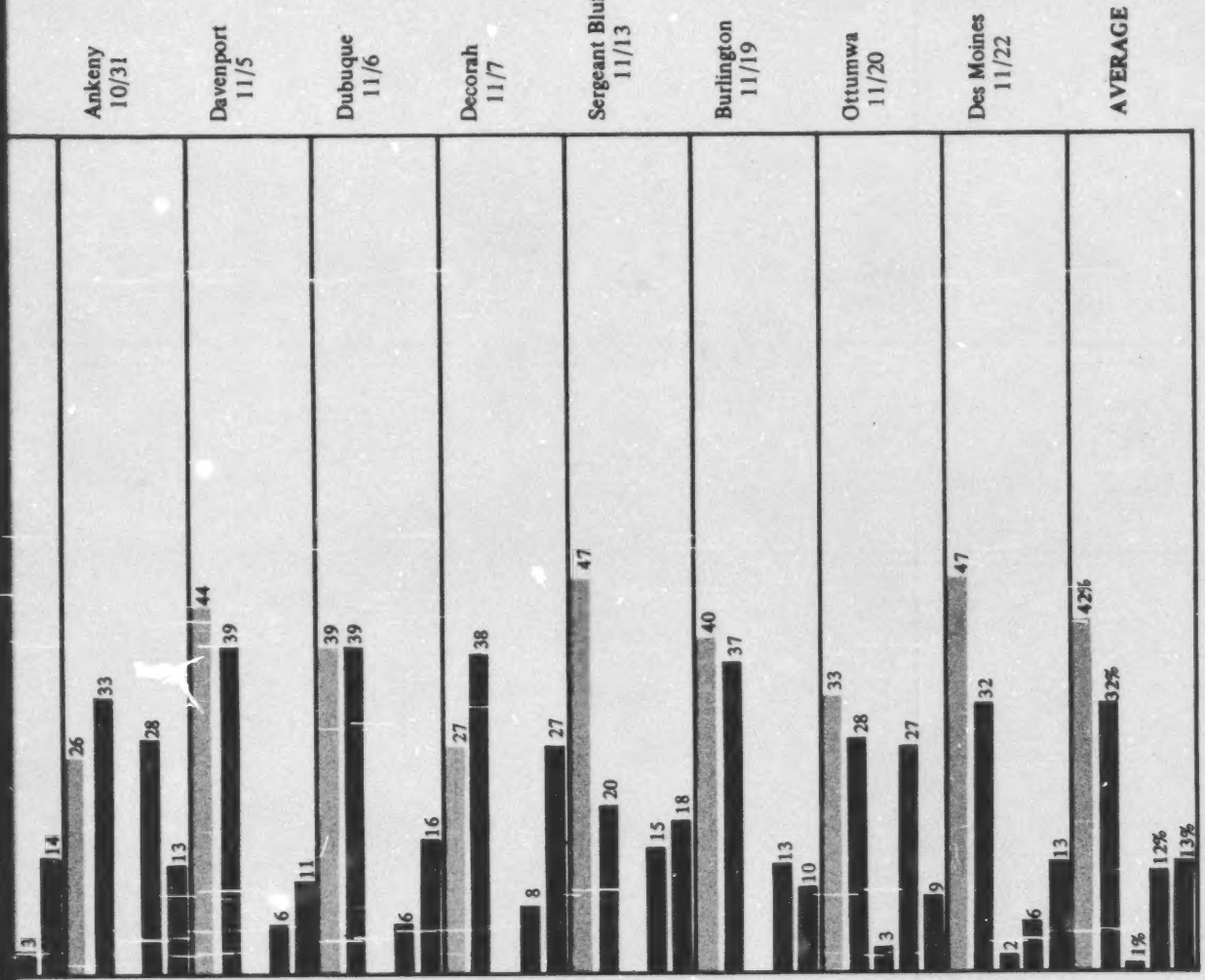
anding of how group dynamics can enhance or interfere with desired group functions?

Figure 8. BREAD AND BUTTERFLIES WORKSHOP PARTICIPANTS



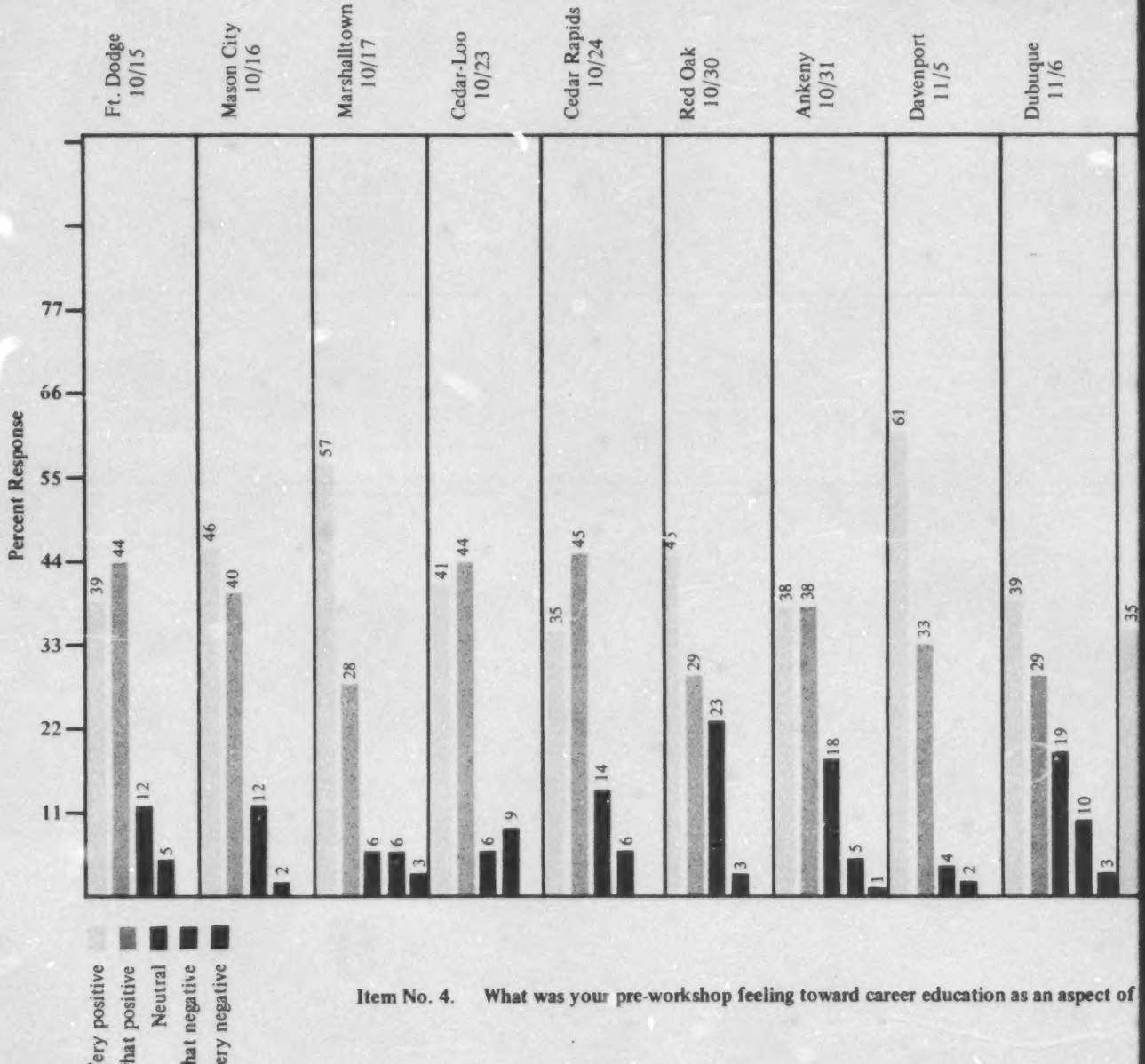
Item No. 1. Are inservice teacher training workshops necessary for the best use of the Br

ERFLIES WORKSHOP PARTICIPANTS QUESTIONNAIRES



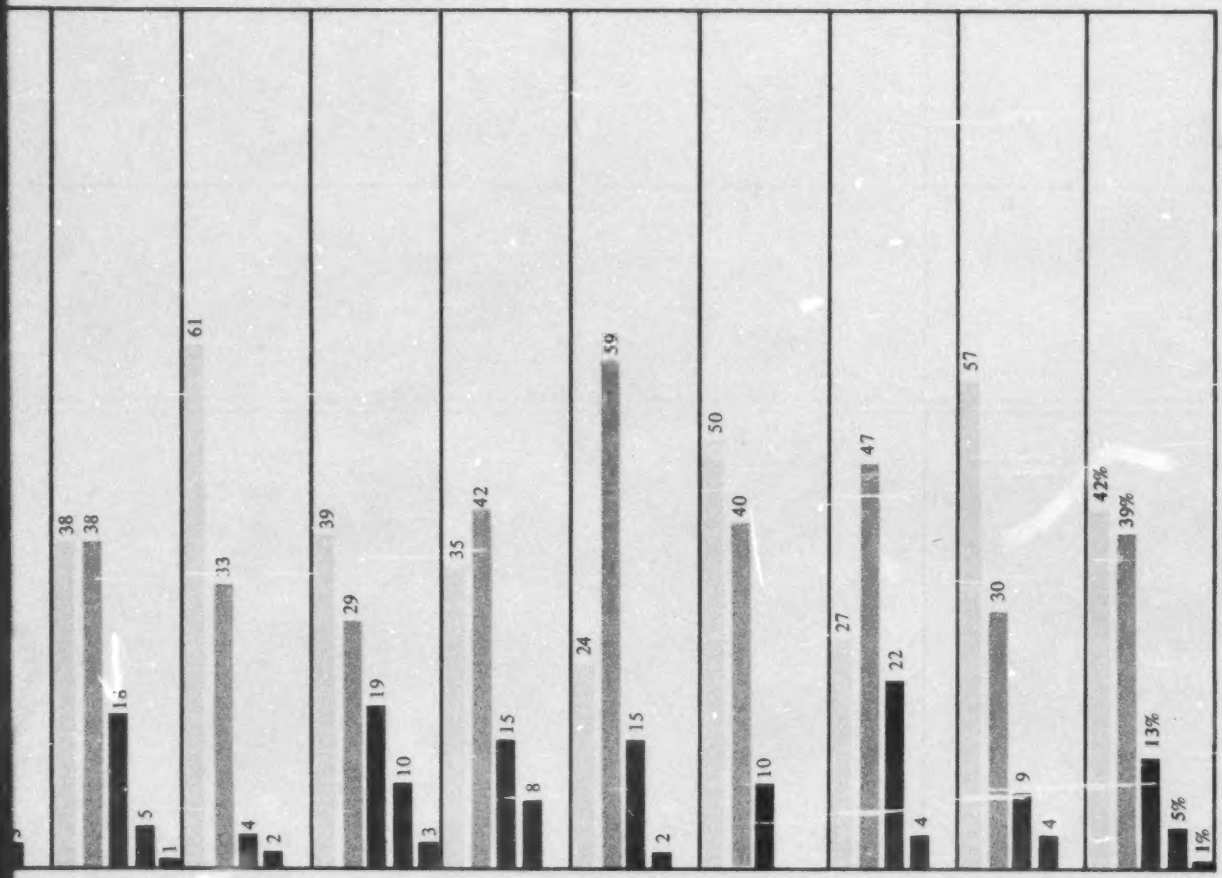
workshops necessary for the best use of the Bread and Butterflies Series in the schools?

Figure 9.

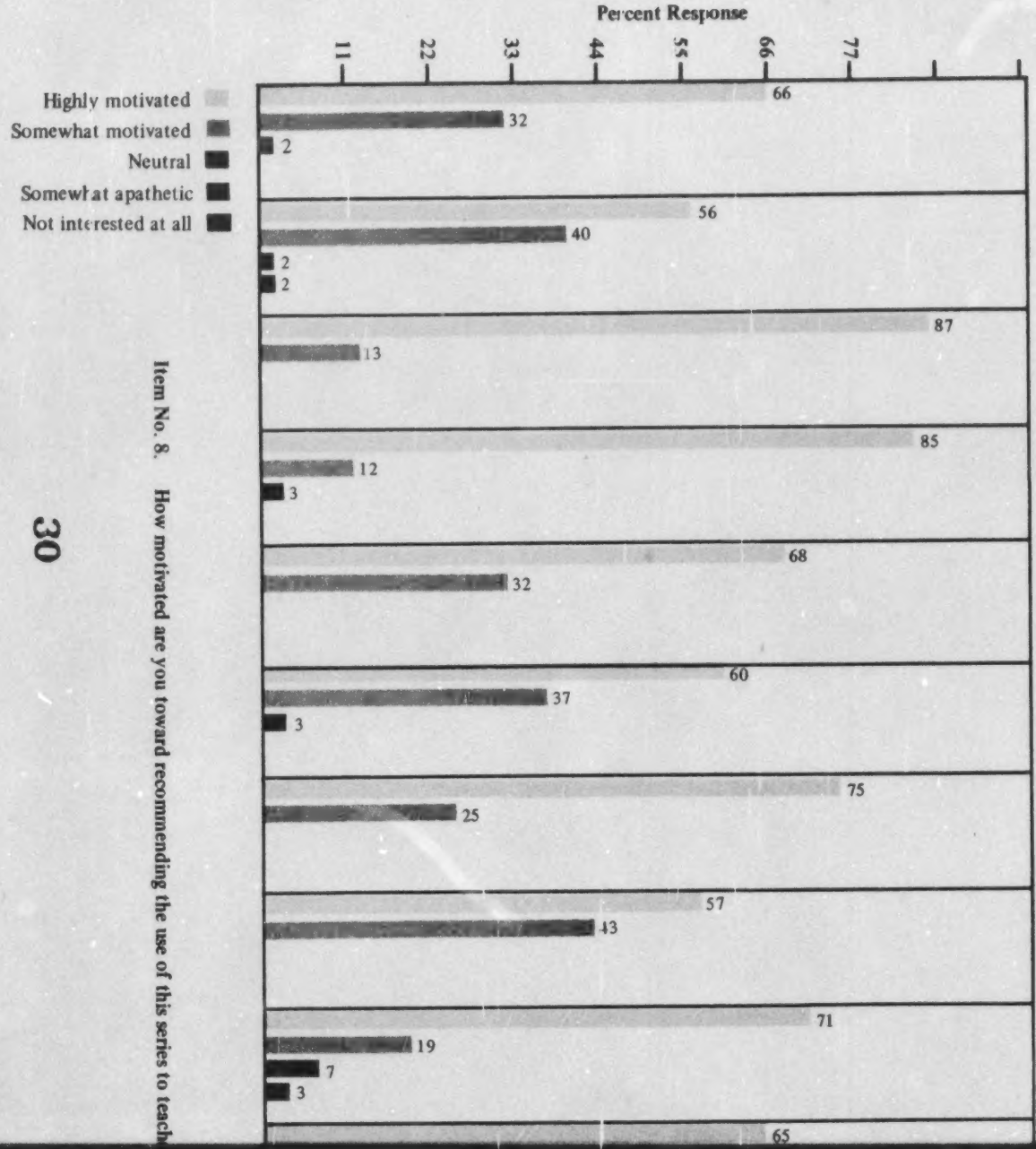


Item No. 4. What was your pre-workshop feeling toward career education as an aspect of

ERFLIES WORKSHOP PARTICIPANTS QUESTIONNAIRES



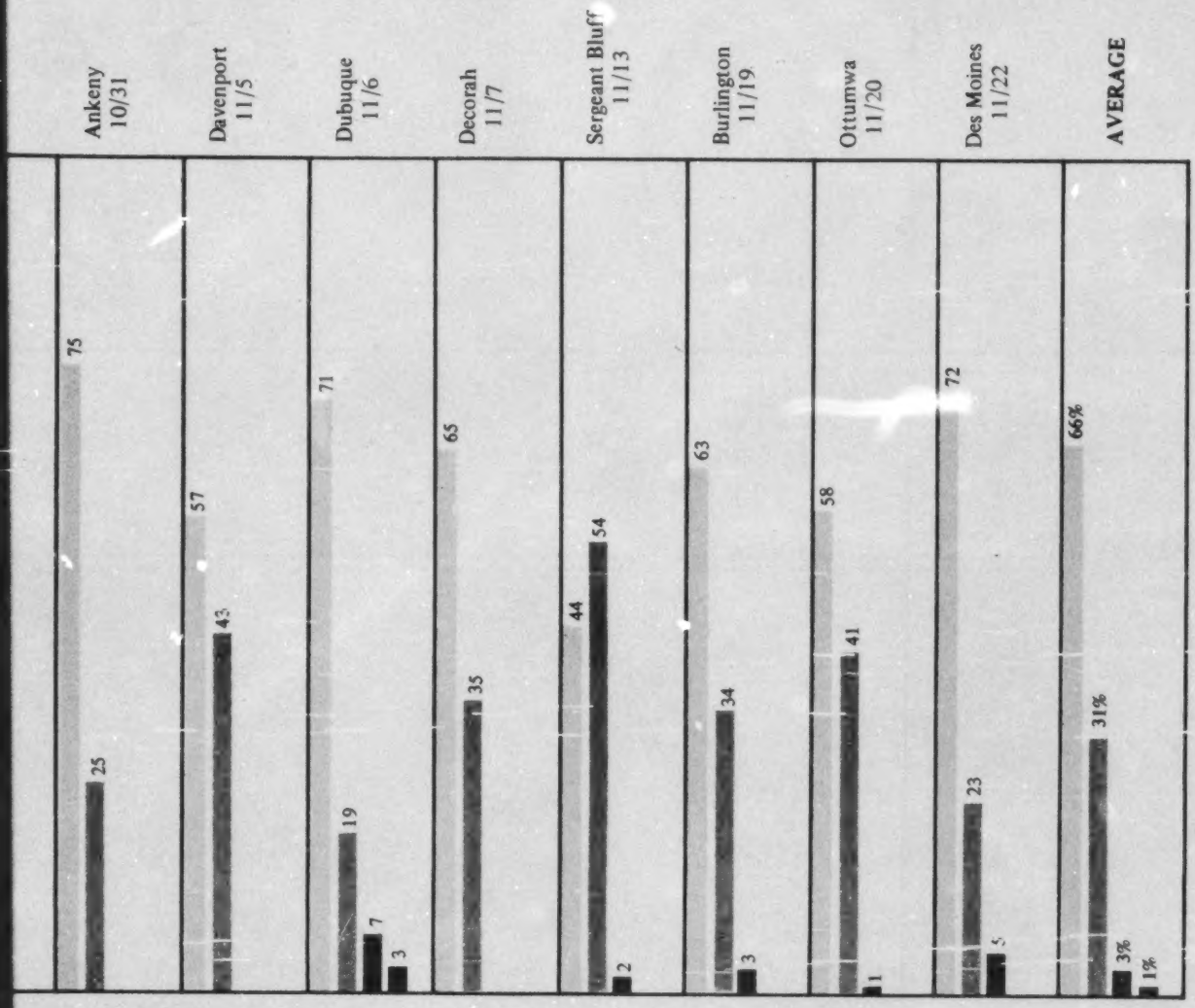
eeling toward career education as an aspect of education?



Item No. 8. How motivated are you toward recommending the use of this series to teach

Figure 10. BREAD AND BUTTERFLIES WORKSHOP PARTICIPANTS

TERFLIES WORKSHOP PARTICIPANTS QUESTIONNAIRES



d recommending the use of this series to teachers in your school system?

Table 1. BREAD AND BUTTERFLIES WORKSHOP PARTICIPA

Fort Dodge 10/15	Mason City 10/16	Marshalltown 10/17	Cedar-Loo 10/23	Cedar Rapids 10/24	Red Oak 10/30	Ankeny 10/31	Davenport 11/5	Dubuque 11/6
VALUED HIGH	VALUED HIGH	VALUED HIGH	VALUED HIGH	VALUED HIGH	VALUED HIGH	VALUED HIGH	VALUED HIGH	VALUED HIGH
			Item No. 11	Assign values on the line provided to the left of each of the workshop your confidence to provide inservice training for this series to teache system. (Indicate with an H those workshop areas you valued highly and				
					Introduction to Bread and Butterflies workshop and r			
65%	55%	50%	41%	36%	62%	40%	54%	56%
					Overview of Bread and Butterflies and explanation of how to use pa			
85%	76%	69%	81%	75%	88%	79%	70%	71%
					Inservice film on Bread and Butterflies demonstrating the use of this se			
82.5%	92%	91%	91%	96%	94%	88%	94%	93%
				Discussion of career education objectives and how career education objectiv				
52.5%	61%	81%	75%	75%	85%	70%	77%	73%
					Explanation of Bread and Butterflies curriculum			
85%	71%	69%	72%	68%	79%	79%	62%	73%
					Show program from Bread and Butterflies, "Treasu			
97.5%	92%	84%	87%	94%	97%	89%	92%	90%
			Teacher involvement with the Bread and Butterflies curriculum guide and how this guid					
80%	67%	81%	93%	70%	94%	76%	77%	80%
					Explanation of self-concept and its development in			
51%	88%	75%	77%	85%	88%	77%	77%	73%
						Self-concept in relation to group situations.		
90%	81%	81%	80%	87%	88%	63%	72%	87%
					Show program from Bread and Butterflies, "Power and			
80%	61%	60%	70%	78%	67%	77%	79%	77%
					Demonstration and explanation of program them			
64%	52%	63%	63%	59%	76%	48%	57%	43%
					Show program from Bread and Butterflies "Decisions,			
97.5%	92%	91%	93%	97%	94%	96%	92%	93%
					Involvement in and explanation of the decision-makin			
56%	75%	83%	80%	72%	91%	75%	60%	73%
				Question and answers. Brief explanation of community action kits				
54%	47%	53%	63%	42%	51%	41%	51%	40%

Percent Response Item No. 11

UTTERFLIES WORKSHOP PARTICIPANTS QUESTIONNAIRES

	Ankeny 10/31	Davenport 11/5	Dubuque 11/6	Decorah 11/7	Sergeant Bluff 11/13	Burlington 11/19	Ottumwa 11/20	Des Moines 11/22	AVERAGE PROFILE
H	VALUED HIGH	VALUED HIGH	VALUED HIGH	VALUED HIGH	VALUED HIGH	VALUED HIGH	VALUED HIGH	VALUED HIGH	
provided to the left of each of he workshop areas listed below that did the most to bolste de inservice training for this series to teachers in grades four, five, and six in your schoo H those workshop areas you valued highly and indicate with an L those you valued less.)									
uction to Bread and Butterflies workshop and registration.	40%	54%	56%	54%	52%	49%	54%	43%	51%
nd Butterflies and explanation of how to use packet material for the workshop.	79%	70%	71%	77%	71%	74%	86%	70%	77%
and Butterflies demonstrating the use of this series in the classroom with students.	88%	94%	93%	89%	97%	89%	86%	87%	91%
n objectives and how career education objectives are developed in Bread and Butterflies.	70%	77%	73%	69%	83%	74%	81%	79%	74%
planation of Bread and Butterflies curriculum guide.	79%	62%	73%	62%	60%	74%	91%	79%	73%
program from Bread and Butterflies, "Treasure Hunt."	89%	92%	90%	96%	97%	95%	95%	96%	93%
Butterflies curriculum guide and how this guide integrates career education into the curriculum.	76%	77%	80%	73%	75%	71%	85%	83%	79%
nation of self-concept and its development in students.	77%	77%	73%	89%	91%	90%	80%	93%	81%
Self-concept in relation to group situations.	63%	72%	87%	85%	88%	90%	87%	94%	84%
gram from Bread and Butterflies, "Power and Influence."	77%	79%	77%	66%	65%	55%	70%	72%	70%
monstration and explanation of program themes.	48%	57%	43%	54%	53%	71%	68%	66%	60%
gram from Bread and Butterflies, "Decisions, Decisions."	96%	92%	93%	96%	94%	97%	95%	94%	94%
ment in and explanation of the decision-making process.	75%	60%	73%	77%	79%	87%	78%	87%	77%
. Brief explanation of community action kits and inservice program air dates.	41%	51%	40%	61%	49%	61%	55%	47%	51%

the attention of task force members in an effort to redesign and improve it prior to initiating the next workshop.

Conclusions

It will be noted from an inspection of the responses made by teacher trainers following all 15 workshops provided, as illustrated in the figures noted above, that the formative evaluation feedback method used by the task force resulted in a consistently effective workshop presentation in spite of differences encountered from one workshop context to the next, such as snowstorms delaying starting times, wide variance in physical facilities including seating arrangements and ambient noise, and occasional A-V equipment failure, to name a few.

The value of the formative evaluation feedback effort to keep the task force workshop presentations oriented to their mission was, in the opinion of the task force members, more than amply justified in terms of the additional time spent in initial planning, workshop "post-mortems," and required replanning efforts, as evidenced by the consistently high level of successful presentation and acceptance demonstrated for all workshops presented.

Contingent upon a decision made to repeat the Bread and Butterflies series workshops, an examination of the data reported in Table 1 strongly suggests that the Introduction and the Question and Answer program segments need to be redesigned.

Summative Evaluation: Career Development Attitude of Upper Elementary Teachers

The teacher attitude evaluation component was designed to answer specific questions raised by the task force as it planned the inservice training for the teacher trainers. Questions which were raised included:

1. What is the present attitude toward career development of upper elementary teachers in Iowa?
2. What would be the effect of the task force's inservice training in the use of the Bread and Butterflies series upon the attitude toward career development of the teacher trainers?
3. Would pre- and post-inservice training attitudes toward career development of the teacher trainers differ significantly from pre- and post-inservice training career development attitudes of the faculties the teacher trainers were to subsequently inservice?
4. Would the inservice provided to fourth, fifth, and sixth grade faculties by teacher trainers significantly improve the attitude of the faculties toward career development?
5. Would providing inservice to faculties positively increase career development attitudes of teacher trainers inserviced by the task force?
6. Would the pre-test level of attitude toward career development demonstrated by the teacher trainers who provided inservice training to their respective faculties be more positive than that of the teacher trainers who did not provide inservice training to their faculties?
7. Would the career development attitudes of fourth, fifth, and sixth grade teachers be positively affected by exposure to the Bread and Butterflies series telecasts without benefit of the inservice provided?
8. Would the career development attitudes of fourth, fifth, and sixth grade teachers be positively affected in time by some unknown variable other than exposure to the Bread and Butterflies

series telecasts and/or inservice training experiences provided?

The Experimental Design

To test hypotheses constructed to find answers to the questions posed above, the design shown in Figure 11 was constructed, where the symbol T stands for teacher trainers; F for fourth, fifth, and sixth grade faculties to be inserviced by teacher trainers; C for control group fourth, fifth, and sixth grade teachers; X for the task force inservice training experience provided for teacher trainers; Y for the inservice experience provided by teacher trainers to their respective fourth, fifth, and sixth grade faculties; and the subscripts 1 and 2 representing career development attitude scores prior to and following the respective inservice training experiences offered:

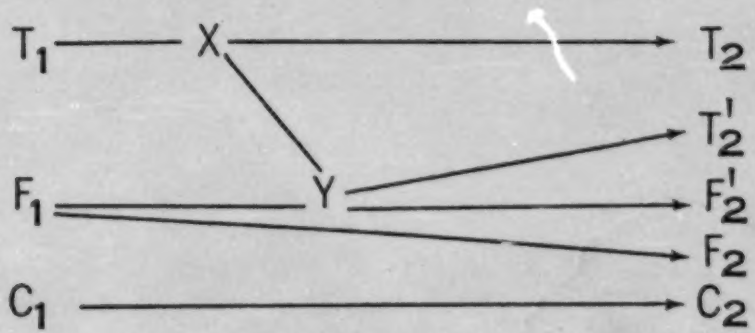


Figure 11. Bread and Butterflies Inservice Training Experimental Design to Test Career Development Attitude Outcomes

The sampling design to be described next, took into account the high mortality rate anticipated for career development attitude test results to be collected by mailed questionnaires and for the expected outcome of the inservice diffusion strategy planned by the task force to branch into the possibilities shown in the schemata depicted in

Figure 11, where some teacher trainers would be post-tested following the task force's inservice training for them and subsequently having carried out their faculty inservice training responsibilities (T_2'), while other teacher trainers who did not inservice their faculties would be post-tested following only the task force inservice training provided for them (T_2). Similarly, some of the teachers included in the faculty sample would be post-tested following receipt of inservice training by teacher trainers (F_2'), while others would receive no inservice training whatsoever (F_2) but would be exposed to the Bread and Butterflies series telecasts. And lastly, the control group of teachers who would not receive any inservice training would be drawn from areas in the state that were blacked out from receiving instructional television during the 1974-75 school year, and thus would not be exposed to the Bread and Butrerflies series telecasts. The writer hastens to add that this condition was not imposed upon the control group to satisfy the requirements of the experimental design. It was, as far as the experiment was concerned, a fortuitous circumstance which existed during the 1974-75 school year because all of the planned Iowa Educational Television telecast towers to complete the state network were not as yet erected.

The Sampling Design

1. Teacher Trainers. In response to a mailed invitation to all school superintendents and principals to assign members of their faculties as teacher trainers to be inserviced by the IEBN-DPI task force in a one-day workshop dealing with the integration of the Bread and Butterflies series into the upper elementary curriculum, 698 individuals were assigned by school systems from all parts of the state with the exception of the areas not receiving the IEBN telecast signal.

The names submitted were used as a sample frame of the population from which to draw the teacher trainer sample of 100 to be used in the evaluation of attitude outcomes. Sequential numbers were assigned to all names and a table of random numbers was used to make the selection of the 100 individuals comprising the teacher trainer sample. The relatively large (7 percent) sample size was drawn because of the anticipated mortality and branching factors discussed earlier.

2. Faculty. Because of the mortality and branching factors anticipated, a 10 percent sample was desired of the 5,000 fourth, fifth, and sixth grade teachers in the state. Also, it was important to draw the sample in such a way that it would be sensitive to making inferences about the diffusion effect of the inservice training efforts planned by the task force in terms of possible student outcomes. Thus, the faculty sample was drawn proportionate to the ratio of school district enrollments to total state enrollment, and randomized in the following manner: school districts in Size Class VII (enrollments of 3,000 or more) contained a total enrollment of 267,489 students or 42.409 percent of the total state enrollment. Thus, 212 of the 500 fourth, fifth, and sixth grade teachers in the faculty sample were drawn from systems in this size class. The number included in the sample from each of these districts was proportionate to the ratio of the enrollment of the school district to that of the enrollment of all districts in the size class. Thus, the Des Moines Independent Community School District with an enrollment of 41,989 had 33 teachers drawn in the faculty sample, while Southeast Polk Community School District with an enrollment of 3,363 had three teachers drawn. The method of drawing the proportionate number of teachers consisted of assigning sequential numbers to each attendance center in each district and using a table of random numbers to draw an

attendance center. Then, using a microfiche frame of sequentially numbered fourth, fifth, and sixth grade faculty assigned to the attendance center drawn, a table of random numbers was used to draw one fourth, one fifth, and one sixth grade teacher per attendance center. This procedure was repeated until the proportionate number of teachers for that school district was drawn. This method, with minor modification, was used to draw the faculty sample from school systems in the remaining six size classes. In drawing school districts from the smaller size classes, compacting was necessary due to the smaller number of teachers to be drawn in relation to the number of attendance centers possible. In such instances, the school districts were first drawn at random; then the attendance center and faculty were drawn at random until the proportionate number of teachers for the faculty sample was drawn. In summary, 212 teachers were drawn for the faculty sample from all school systems in Size Class VII (enrollment of 3,000 or more), 60 were drawn from among half the school districts in Size Class VI (enrollments between 2,000 and 2,999), 32 were drawn from among a third of the school districts in Size Class V (enrollments of 1,500-1,999), 47 were drawn from among a quarter of the school districts in Size Class IV (enrollments of 1,000-1,499), 50 were drawn from among a quarter of the school districts in Size Class III (enrollments of 750-999), and 99 were drawn from one-tenth of the combined school districts in Size Classes I and II (enrollments of 151-499 and 500-749).

All school districts with enrollments of 3,000 or more were represented in the faculty sample, while 92 (21.8 percent) of the remaining 422 school districts were represented in the faculty sample as a result of random selection and proportionate sampling techniques described earlier.

3. Control Group. The control group of fourth, fifth, and sixth grade teachers was drawn from 38 school districts located in three different geographic areas of the state. These school districts could not receive the Bread and Butterflies series telecast because they were located outside the 1974-75 IEBN telecast range capability. For that reason, teacher trainers were not solicited from these school systems to receive inservice training in the use of the series and fourth, fifth, and sixth grade teachers from these school districts were not included in the faculty sample which was drawn. There was a total of 200 fourth, fifth, and sixth grade teachers employed by these districts and a 50 percent sample of 100 was drawn because of the high incidence of mortality expected for mailed survey attitude test returns from a group for which no motivation in the form of inservice or telecasts was provided. Again, using the proportionate sampling and randomization by attendance center and faculty techniques as described previously for the faculty sample, a control group sample of 100 fourth, fifth, and sixth grade teachers was drawn. In summary, 33 teachers were drawn from the one Size Class VII school district, 6 teachers were drawn from each of the two Size Class VI school districts, 21 teachers were drawn from three school districts drawn at random from the six school districts in combined Size Classes IV and V, and 34 teachers were drawn from 10 school districts drawn at random from the 29 school districts in combined Size Classes I, II, and III. One hundred fourth, fifth, and sixth grade faculty from 16 of the 38 school districts in the telecast blackout areas were represented in the control group sample.

Career Development Attitude Testing Instrument

The instrument selected to test teacher attitude toward career development was reported by Blietz (8) in a study he conducted to

evaluate teacher perception of career development education outcomes as a result of exposure to career development education inservice training. Blietz's instrument was a modified version of one reported by Tennyson, Soldahl and Mueller, The Teacher's Role in Career Development. Washington, D.C.: Minnesota Guidance Publication, 1971. The present writer further modified the Blietz instrument by deleting four of the items which did not discriminate teacher differences in the Blietz experiment. The modified Blietz instrument thus derived contained 16 items, each with a 5-point response scale ranging from strongly agree to strongly disagree. A value of 1 was assigned to strongly agree on all items except two. In these two cases, the values were reversed for scoring purposes consistent with the wording of the items. Compartmentalization of career development attitude or other analyses of career development attitude as might be possible from an analysis of responses to specific instrument items was not intended nor attempted by this writer. Each item of the modified instrument used in the study reported here was scored and the total of the 16 item scores yielded a test score which was used as the respondent's career development attitude score. Respondents' test scores possible thus ranged from 16, for those exhibiting the most positive responses to all items in the instrument, to a test score of 80, for those exhibiting the most negative responses to all items in the instrument. A respondent who marked each item uncertain would receive a score of 48. Mean scores for sample groups, which were of a lower value than 48, would be considered indicative of positive career development attitude, while mean scores for sample groups which were of a higher value than 48 would be considered indicative of negative career development attitude.

Pre- and Post-Test Returns

1. Pre-Test. The modified Blietz career development attitude test described earlier was sent in October 1974 to all teachers selected in the teacher trainer, faculty, and control group samples with an appropriate cover letter soliciting the return of the completed test within a day or two of receipt. In the case of each sample, over three-fourths of the returns were received within ten days. No returns were used if received following the date of possible exposure to either task force inservice training of teacher trainers or diffusion inservice training provided by those teacher trainers to their respective faculties. Each pre-test was coded for sample and respondent within the sample.

Pre-test returns for the teacher trainer sample numbered 85, for an 85 percent return. Three hundred and thirty (330) pre-tests from the 500 faculty sample were returned, for a return of 66 percent. Pre-test returns for the control group sample numbered 70, for a 70 percent return.

2. Post-Test. The post tests were mailed to all respondents of the pre-tests in each of the three sample groups and were coded to allow for matching of pre- and post-test response by respondent in each sample. May 5, 1975 was selected as the mailing date of the post-tests to allow for as much time as possible within the school year for effect of inservice training experiences to take place, while also assuring that the test would be received by each respondent prior to summer vacation school recess. The identical modified Blietz career development attitude test used in the pre-test was used in the post-test with all samples. An additional three questions were appended to the end of the post-test sent to teacher trainers. These questions collected data which were used descriptively to note whether or not the respondent provided

inservice training to fourth, fifth, and sixth grade teachers; also, if inservice was provided, the number of teachers inserviced in each of the grade levels; and, if inservice was not provided, to allow for the specification of the reason for not providing it. The post-test instrument sent to the faculty and control group samples contained two questions which were appended to the end of the test and differed from those appended to the teacher trainer post-test. These questions solicited data which indicated if the respondent received inservice training in the use of the Bread and Butterflies series and, if so, to indicate by one of four choices given the length of time devoted to the provision of inservice training.

June 30, 1975 was chosen as the cut-off date for accepting post-test returns. All post-test returns, with one exception, were received prior to that date. Seventy-five (75) teacher trainers returned post-tests, for a post-test return of 88 percent (75 percent of the original sample). Two hundred and twenty-four (224) faculty sample respondents returned post-tests, for a 67 percent post-test return (45 percent of the original sample). Thirty-nine (39) control group respondents returned post-tests but two indicated on the appended post-test questions that they had participated in a Bread and Butterflies inservice training institute outside their county and therefore were eliminated from the control group. The 37 remaining returns constituted a 53 percent post-test return (37 percent of the original sample).

The 75 post-test returns of teacher trainers branched into a return of 35 for teacher trainers who did not provide inservice training to their faculties (T_2) and a return of 40 for teacher trainers who did inservice their faculties (T_2').

The 224 post-test returns from the faculty sample respondents branched into a return of 91 from those who were inserviced in the use of the Bread and Butterflies series (F_2') and a return of 133 from those who received no such inservice training (F_2).

Findings

The career development attitude pre- and post-test scores were examined for each of the samples of teachers in relation to a number of hypotheses constructed to find answers to the previously noted questions raised by the task force.

1. In answer to the question concerning the career development attitude of upper elementary teachers at the start of the school year, direct examination of the pre-test sample mean scores indicates that the career development attitude was positive for the teacher trainer, faculty, and control group samples.

The teacher trainer sample of 85 respondents (T_1) had a mean pre-test attitude score of 33.164 with a standard error of the mean of .781. The faculty sample of 330 respondents (F_1) had a mean pre-test score of 34.324, with a standard error of the mean of .422. The control group sample of 70 respondents (C_1) had a mean pre-test score of 34.557 with a standard error of the mean of .888.

In examining whether the slight differences between the positive career development attitude means noted were statistically significant, two-tailed t tests of means from independent samples were conducted between the mean scores for samples T_1 and F_1, F_1 and C_1, and T_1 and C_1, using the following null hypothesis: There is no significant difference between the pre-test career development attitude mean score response of (sample) and the pre-test career development attitude mean score response of (sample). A t statistic of 1.353 was derived in a test of difference

between the mean scores of samples T_1 and F_1. Similarly, a t of .243 was derived in a test of difference between the mean scores of samples F_1 and C_1, and a t of 1.123 was derived in a test of difference between the mean scores of samples T_1 and C_1. In all three comparisons the magnitude of the t statistic was inadequate to reject the null hypothesis at the .05 level of significance. It is reasonable, therefore, to assume that no statistically significant difference existed among the positive mean pre-test career development attitude scores of the three sample groups.

2. In answer to the task force's question concerning the operation of an unknown variable during the 1974-1975 school year which might have affected the career development attitude of upper elementary teachers, it was important to study the pre- and post-test means of a control group of teachers who were not exposed to the inservice training and telecast exposure variables being studied. An examination of the pre- and post-test mean scores of the control group served to test the null hypothesis: There is no significant difference between the career development attitude pre-test mean score (C_1) and post-test mean score (C_2) of the control group sample. A two-tailed t test of means from related samples was used to analyze the statistical significance of the difference between the control group pre-test mean of 34.557 and post-test mean of 34.621. (It is of interest to note that the pre-test mean score of post-test control group respondents is identical to the total pre-test mean score C_1 from the 70 respondents.) The t statistic derived was .069 and was of insufficient magnitude to reject the null hypothesis at the .05 level of significance. It is reasonable to assume, therefore, that variables, other than those studied, had no effect upon changing career development attitudes of upper elementary teachers in Iowa during the course of the 1974-1975 school year.

3. In seeking an answer to the task force's question concerning the effect upon the career development attitude of upper elementary teachers caused by exposure to the Bread and Butterflies telecast series without benefit of inservice training in its use, an examination of pre- and post-test mean scores of the faculty sample that did not receive inservice training from teacher trainers was undertaken. To test the null hypothesis, there is no significant difference between the career development attitude post-test mean score (F_2) and the pre-test mean score (F_1) of teachers in the F_2 branch of the faculty group sample, a one-tailed t test of means from related samples was used to analyze the statistical difference between the post-test (F_2) mean score of 34.661 and the pre-test (F_1) mean score of 34.06 for the same teachers. The derived t statistic of 1.323 was insufficient to reject the null hypothesis at the .05 level of significance. It is reasonable to assume, therefore, that the career development attitude of upper elementary teachers in the faculty sample who were exposed to the Bread and Butterflies series telecasts, but who were not inserviced in the use of the series by teacher trainers, did not change from its initial positive level during the course of the 1974-1975 school year.

4. Did the inservice training provided by teacher trainers improve attitude toward career development of faculties, was a question which the task force thought important to answer.

An examination of pre- and post-test mean scores of the faculty sample that did receive inservice training in the use of the Bread and Butterflies series by the teacher trainers provided an answer to the question. To test the null hypothesis, there is no significant difference between the career development attitude post-test mean score (F_2') and the pre-test mean score (F_1) of teachers in the F_2' branch of the

faculty group sample, a one-tailed t test of means from related samples was used to analyze the statistical difference between the post-test (F_2') mean score of 31.549 and the pre-test (F_1) mean score of 33.043 for the same teachers. The derived t statistic of 2.845 was of sufficient magnitude to reject the null hypothesis at the .01 level of significance. At this point in the analysis the writer believed it necessary to examine if the statistically significant but slight positive shift of 1.494 points between pre- and post-test mean scores was real or due to a rare chance occurrence. A comparison was undertaken of the mean gain score (difference between pre-test and post-test scores) of the faculty sample group that did not receive inservice training to the mean gain score of the faculty sample group that was inserviced by the teacher trainers. To test the null hypothesis, the career development attitude post-test mean gain score of teachers who received inservice training from teacher trainers was not more positive than the post-test mean gain score of teachers who did not receive inservice training from teacher trainers, a one-tailed t test of means from independent samples was used to analyze the statistical significance of the difference between the post-test mean gain score of 1.494 for teachers who were inserviced, and the post-test mean gain score of -.601 for teachers who were not inserviced. The t statistic of 1.1549 was of insufficient magnitude to reject the null hypothesis. Thus the writer concludes the slight positive shift of 1.494 points in the post-test mean career development attitude score of teachers who were inserviced by teacher trainers did not represent a significantly different gain from that exhibited by teachers who were not inserviced.

5. In answer to the task force's question, did the task force's in-service training change the level of career development attitude initially

exhibited by teacher trainers, the post-test mean career development attitude score of teacher trainers in combined samples T_2 and T_2' was compared to the pre-test mean score of T_1 of the same teachers in an effort to test the null hypothesis: The mean post-test career development attitude score of teacher trainers who received inservice training from the task force will not be significantly more positive than the mean pre-test score for the same teachers. A one-tailed t test of means from related samples was used to analyze the statistical significance of the difference between the teacher trainer pre-test mean score of 33.1866 and post-test mean score of 31.653. The derived t statistic of 2.5456 was of sufficient magnitude to reject the null hypothesis beyond the .01 level of significance. It is reasonable to conclude that there was a slight positive shift in the initially positive attitude of teacher trainers following provision of inservice training in the use of the Bread and Butterflies series by the task force.

6. The task force was interested in knowing if the provision of inservice training to faculties by the teacher trainers would result in increasing the positive attitude of the teacher trainers. The pre-post test mean gain score (1.714) of teacher trainers who did not provide inservice training to their faculties ($T_2 - T_1$) was compared to the pre-post test mean gain score (1.375) of teacher trainers who did provide inservice training to their faculties ($T_2' - T_1$) using a one-tailed t test of means from independent samples to test the null hypothesis: The pre-post test career development attitude mean gain score of teacher trainers who did provide inservice training to their faculties was not significantly more positive than such mean gain score of the teacher trainers who did not provide inservice training to their respective faculties. The derived t statistic of .2785 was insufficient to reject the null hypothesis leading to the conclusion that the provision of inservice training to faculties

by teacher trainers had no statistically significant effect upon the degree of career development attitude change of the teacher trainers.

7. The task force was also interested in knowing if the pre-test level of attitude toward career development demonstrated by teacher trainers who provided inservice training to their faculties was more positive than that of the teacher trainers who did not provide inservice training to their faculties.

A mean pre-test career development attitude score of 35.6857 was noted for teacher trainers who did not provide inservice training to their faculties, while a mean pre-test score of 31 was noted for teacher trainers who did inservice their faculties. To test the statistical significance of this apparent more positive mean pre-test attitude score of the teacher trainers who did provide inservice training to their faculties, a one-tailed t test of means from independent samples was used to test the null hypothesis: The mean pre-test career development attitude score of teacher trainers who did provide inservice training to their faculties is not more positive than the mean pre-test career development attitude score of teacher trainers who did not provide inservice training to their faculties. A derived t statistic of 2.908 was of sufficient magnitude to reject the null hypothesis beyond the .01 level of significance. It seems warranted, therefore, to conclude that the teacher trainers who did provide inservice training to their faculties, as a group, on the average displayed a more positive career development attitude of in excess of four-and-a-half points than did the teacher trainer group that did not provide inservice training to their faculties.

8. Lastly, the task force wanted to know if pre- and post-inservice training attitudes toward career development of the teacher trainers differ significantly from pre- and post-inservice training career

development attitudes of the faculties the teacher trainers were to subsequently inservice.

From the discussion of findings in 1. above, it has been demonstrated that the mean pre-test career development attitude score of teacher trainers (T_1), 33.164, did not differ significantly from the mean pre-test career development attitude score of respondents in the faculty sample (F_1), 34.324.

Because the post-test faculty sample scores of branches F_2 and F_2' were not significantly different, as noted in the discussion of findings in 4. above, and because the post-test teacher trainer sample scores of branches T_2 and T_2' were not significantly different, as noted in the discussion of findings in 6. above, for the present analysis the writer has combined both post-test sample branches in the faculty sample and in the teacher trainer sample into one post-test faculty sample and one post-test teacher trainer sample to take advantage of the increased statistical testing power to be gained from the larger number of observations in each of the combined post-test sample groups.

In analyzing for post-test career development attitude differences between the teacher trainer sample and faculty sample, the mean post-test score of 33.397 of the combined faculty sample was compared to the mean post-test score of 31.653 of the combined teacher trainer sample. A two-tailed t test of means from independent samples was used to test the null hypothesis: There is no significant difference between the mean post-test career development attitude score of the teacher trainer sample and the mean post-test career development attitude score of the faculty sample. A derived t statistic of 2.0936 was sufficient to reject the null hypothesis at the .05 level of significance. Thus, it can be assumed that the mean post-test career development attitude score of the

teacher trainers was more positive than that of the mean post-test faculty career development attitude score.

In further comparing the post-test mean scores, no significant difference was found between the post-test mean score of 33.397 for the faculty group and the post-test mean score of 34.6216 for the control group when subjected to a two-tailed t test of means from independent samples as evidenced by a t statistic of 1.099. And, as may be deduced from the results heretofore reported, the post-test mean score of 31.653 for the teacher trainers was found to be significantly different from the 34.6216 post-test mean score of the control group, as evidenced by a t test of means from independent samples yielding a t statistic of 2.236 which exceeded the .05 level of significance.

Conclusions

The first, and probably most noteworthy, conclusion that can be drawn from the results of this study is that the career development attitude of upper elementary teachers in Iowa is positive. Further, this positive attitude seems quite stable and was not subject to change during the course of the 1974-1975 school year as evidenced by observations made on a control group of teachers. This finding, in light of the research cited in the literature as heretofore noted, augurs well for the use that will be made with pupils of the Bread and Butterflies telecast series, materials, methods and skills imparted as a result of inservice training provided.

The following conclusions are of interest only as they apply to the happy circumstance where career development attitude of teachers are positive to begin with and should not be generalized to situations where teacher attitudes are ambivalent or negative.

Where teacher career development attitudes are positive to begin with, a conclusion drawn from the findings of this study suggests that availability alone of a telecast series dealing with elementary level career development topics for pupils will not increase the positive attitude of the upper elementary teachers. Indeed, the provision of inservice training to the upper elementary teachers by teacher trainers in the use of the Bread and Butterflies series could not conclusively be attributed with bettering the career development attitude of the upper elementary faculty members studied. However, it was of interest to note that the one-day inservice training workshop provided to teacher trainers by the IEBN-DPI task force did effect a real gain in positive attitude of the teacher trainers. Further, the attitude gain noted was not attributed to the reinforcement that might have been provided to the teacher trainers as a result of their provision of inservice training to their faculties. The conclusion drawn from these findings leads one to believe inservice training for the purpose of improving initially positive career development attitudes of upper elementary teachers was carried out with greater success by a state level task force in a one-day workshop format than by unscreened upper elementary faculty peers of teachers using a variety of inservice training formats.

At this point, the reader should be reminded that the outcomes noted may have been entirely different in a situation in which initially the career development attitude of upper elementary teachers might not have been positive as experienced in this experiment.

Lastly, of importance to those chosen with the responsibility of selecting teacher trainers to provide career development related inservice training to upper elementary teachers is the need to screen teachers carefully, as supported by the fact that, in general, teacher trainers who

attained a career development attitude score of at least 31 on the instrument used in this study were more apt to carry out their inservice training assignments than were the teacher trainers who initially scored 34 or more.

Summative Evaluation: Workshop Diffusion Strategy Outcomes

The task force was interested in knowing if the diffusion approach it utilized in bringing inservice training in the use of the Bread and Butterflies series to teachers of fourth, fifth, and sixth grade children would be cost-effective. To make such a decision requires that the costs of the workshops as noted in Table 2., when compared to workshop outcomes attained, were effectively and efficiently expended. The sections presented earlier in this report are addressed to the effectiveness of the workshops presented. Additional data that were collected in the post-test sampling procedure are now reported in an effort to gain insight into the level of efficiency with which the diffusion strategy succeeded in providing inservice training to upper elementary grade teachers by means of regional teacher trainer workshops provided by the state level task force.

Number of Teacher Trainers Who Inserviced Their Faculties

As a result of the fourteen regional one-day workshops conducted by the task force members, 698 teacher trainers received inservice training in the information, methods, skills, material and faculty training techniques required to successfully introduce the Bread and Butterflies series into the curriculum of the upper elementary grade levels. Reports from the 75 teacher trainers received in the post-test survey, discounting the attrition of 25 respondents from the pre-test sample number of 100, indicate 40 teacher trainers did provide inservice training in the use of the Bread and Butterflies series to their respective faculties.

Table 2. Bread and Butterflies Inservice Training Task Force Budget*

Category	Agency DPI	IEBN	Total Expenditure
Salary and Benefits reported in man-day equivalents			
Professional	150	370	520
Clerical-Technical	15	264	279
Printing	$ 1,680	$ ---	$ 1,680
In-State Travel	1,401	2,127	3,528
Out-of-State Travel	600	1,600	2,200
Conferences	---	15,541	15,541
Supplies	175	50	225
Equipment purchase	---	440	440
Equipment rental	---	---	---
Books	4,701	200	4,901
Total	$ 8,557	$19,958	$28,515

* Above costs and man-days were expended during the following periods:

January 1973 - December 1973: Preparation phase (initial consortium work, previews, public relations, pre-planning).

January 1974 - December 1974: Inservice phase (planning and delivery of teacher trainer workshops).

January 1975 - August 1975: Follow-through phase (faculty workshops, follow-ups, and evaluation).

These 40 teacher trainers represented 53 percent of the 75 teacher trainer respondents to the post-test survey and 40 percent of the original teacher trainer sample of 100. Whether one ascribes 53 percent or 40 percent as the level one may expect the number of teacher trainers to carry out faculty inservice training assignments following workshops provided by the task force, depends upon the assumptions one makes

concerning the possible performance of the 25 teacher trainers in the original sample who did not respond to the post-test survey. Using the more conservative statistic of 40 percent, and because of the random method utilized in drawing the teacher trainer sample, the writer believes it reasonable to conclude that at least 279 of the 698 teacher trainers inserviced by the task force subsequently provided inservice training to their respective faculties.

Diffusion Effect for Statewide Upper Elementary Faculties

How many faculty members were inserviced by the teacher trainers, is a question of vital importance in deriving the diffusion ratio of the regional workshop inservice training strategy adopted by the task force. Insight into this question was gained by two approaches. The first asked the teacher trainers who responded that they had provided inservice training in the post-test survey, to list by grade level the number of faculty members inserviced. The 40 teacher trainers who did provide inservice training reported the recipients to be 77 fourth grade teachers, 77 fifth grade teachers, and 86 sixth grade teachers, for a total of 240 upper elementary teachers. This averaged 6 upper elementary teachers per teacher trainer. When applied to the 279 teacher trainers who provided inservice training to their faculties, it is reasonable to assume that 1,674 upper elementary teachers were inserviced by teacher trainers.

The second approach used to determine the number of upper elementary teachers inserviced by the teacher trainers utilized a response to the post-test survey instrument received from the faculty sample. Ninety-one (40 percent) of the 224 post-test respondents in the faculty sample indicated that they did receive inservice training from teacher trainers. Because the faculty sample was designed to provide information that could

be generalized to the upper elementary teachers in the state as a whole, and because the 224 post-test faculty sample returns constituted approximately five percent of the 5,000 upper elementary teachers in the state, the writer believes it reasonable to accept the 40 percent level of faculty inservice reported. When applied to the state population of upper elementary teachers, 2,000 is derived as the number of upper elementary teachers inserviced by teacher trainers.

Both approaches taken to determine the number of upper elementary faculty members inserviced by the teacher trainers seem to be mutually verifiable, in that the 1,674 figure derived from the teacher trainer post-test sample report is very close to the 2,000 figure derived from the faculty post-test sample report.

From the foregoing discussion, therefore, the writer concludes that a potential diffusion ratio of 1 to 6 is possible. That is to say, every teacher trainer who provided inservice training did so on the average for 6 faculty members. However, when considering that, conservatively, 40 percent of the teacher trainers inserviced by the task force subsequently provided inservice training to their respective faculties, an adjusted overall diffusion ratio of 1 to 2.4 may be applied on the average to the entire group of teacher trainers inserviced by the task force. Thus, the close-to-700 teacher trainers inserviced by the task force, in turn inserviced about a third of the 5,000 upper elementary faculty members in the state, with attendant potential for maximizing the use to be made of the Bread and Butterflies career development series with a third of the fourth, fifth, and sixth grade pupils in the state.

Length of Inservice Provided to Faculties

Of concern to the task force when planning the teacher trainer workshops was the need to provide the teacher trainers with a variety of

inservice training methods that could be adapted to conditions under which they would ultimately provide inservice training to their faculties.

The faculty sample respondents who were inserviced by teacher trainers were asked in the post-test survey to indicate the length of time their teacher trainers devoted to the inservice training provided. Of the 91 faculty respondents indicating receipt of inservice training, 26 indicated the training provided was less than one hour in duration, 29 indicated the training provided lasted between one and three hours, 27 indicated it was more than three hours but less than a day, and 9 indicated the inservice training to be a day or more in duration. From the platikurtic distribution of responses, the writer concludes that the workshop provided by the task force succeeded in presenting methods and inservice teaching skills which did not inhibit the teacher trainers from presenting inservice to their faculties within the variety of imposed limits and constraints encountered statewide at the local school system level.

Reasons Given by Teacher Trainers for Not Providing Inservice Training to Their Faculties

Believing that something of value could be learned from an examination of reasons given most often by teacher trainers for not following through with the provision of inservice training to their faculties, an item on the teacher trainer post-test survey instrument was included to solicit such information. The item was completed by 33 of the 35 teacher trainers who responded in the post-test survey as not having provided inservice training to their faculties. Of the 33, 7 indicated someone else in their system provided the inservice training, 8 indicated no time was provided to them by their administrators in which to carry out the

inservice training, 4 indicated no time was provided to the faculty in which the inservice training could be provided, and 14 indicated a variety of miscellaneous reasons not easily grouped under any meaningful classification.

Conclusions

From an examination of the findings, the diffusion approach utilized by the task force to inservice upper elementary teachers in Iowa must be deemed cost-effective.

In return for the resources expended, as shown in Table 2., statewide inservice training for the effective use of the quality career development telecast series, Bread and Butterflies, was provided by a relatively small state level task force to a corps of some 700 teacher trainers, who in turn inserviced a third of the upper elementary teachers in the state. Further, the inservice training provided was timely in that information, methods, skills, and materials were provided to teachers in a short period of time at the start of the school year sufficiently in advance of the series telecasts intended for student use. From the positive attitude displayed by the teachers and teacher trainers, and maintained during the course of the year, there is every reason to believe, if the large body of research literature dealing with teacher attitude is to be given credence, that the Bread and Butterflies series will be effectively utilized in Iowa classrooms to: help shape positive student affective growth for career concepts, help students develop wholesome personal and societal values, and develop student decision-making skills.

Also, as a result of the task force diffusion approach, each local school attendance center and area education agency media center has a Bread and Butterflies Curriculum Guide for Teachers with at least one staff member trained in its use and application. The 5,000 Bread and

Butterflies curriculum guides for teachers distributed in the state are printed on quality paper and bound in a plasticized cover designed to withstand wear during the next four to five years during which the series will be telecast.

Local schools and area education agency media centers were aided by task force members and respective agency staffs in securing materials such as tape and film copies of the series programs for loan to schools that found it difficult to access the telecast presentations or encountered scheduling problems for student viewing.

Summary of Conclusions

1. The fourteen teacher trainer workshops provided by the IEBN-DPI Bread and Butterflies task force were carried out with consistent goal oriented effectiveness and at a high level of teacher trainer acceptance.
2. The formative evaluation techniques utilized by the task force proved to be effective adjuncts to workshop coordination and management decision making.
3. The attitude displayed by upper elementary teachers in Iowa for career development is positive and stable, and provides a basic condition requisite to the successful use of the Bread and Butterflies series telecasts and related materials with students.
4. The positive career development attitude displayed by teacher trainers was improved following the one-day workshop conducted for them by the IEBN-DPI task force.
5. A corps of close-to-700 teacher trainers was developed to provide inservice training to LEA upper elementary faculties in the use of the Bread and Butterflies series.

6. The teacher trainer corps developed as a result of the task force conducted workshops, inserviced a third of the upper elementary teachers in the state in the use of the Bread and Butterflies series during the 1974-1975 school year.
7. It is possible to improve the demonstrated overall teacher trainer-faculty inservice diffusion ratio of 1 to 2.4 to an inservice training ratio of 1 to 6 by utilizing appropriate screening techniques in the selection of teacher trainers.
8. To achieve a saturated level of inservice training in the use of the Bread and Butterflies series for the statewide upper elementary teaching faculty will probably require the provision of workshop follow-up activities designed for elementary school attendance center principals, emphasizing the importance of and methods for supporting their teacher trainer(s) in their faculty inservice training activities.
9. The factors directly responsible for the IEBN-DPI Bread and Butterflies task force's successful achievement of its mission are: allowance for adequate planning time for workshop content and presentation strategies, interagency coordination and cooperation both at the administrative level as well as the task force team level, provision for at least a minimally adequate mission-related budget, the design and purposeful use made of both formative and summative evaluation information in the mission related-decision making process, and the cooperation and hospitality of LEA and area agency personnel.

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AB RACT

The evaluation of the Iowa Educational Broadcasting Network-Department of Public Instruction inservice training workshops to install the Bread and Butterflies career development series into the curriculum of the upper elementary grades in Iowa utilizes three evaluation bases. The first focuses upon how well the task force was able to maintain the goal-oriented presentation of the fourteen workshops. It utilized formative evaluation feedback techniques. The second evaluation base focuses upon a study of the attitude toward career development exhibited by upper elementary teachers in the state as a whole, and that exhibited by the teachers trained at the workshops. The attitude study utilized research methodology. The third base utilized cost-effect data to derive some judgments to help in the decision making process dealing with future inservice training in this area.

A summary of conclusions is presented to highlight some of the more salient outcomes of the total evaluation.

Possible Terms:

	Descriptors	Identifers
Major:	Evaluation Methods InService Teacher Education Career Development	Bread & Butterflies
Minor:	Career Education Curriculum Guides Elementary Education	